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LECTURES ON SURGERY, MEDICAL AND OPERATIVE,

DELIVERED AT

St. Bartholomew's Hospital;

BY MR. LAWRENCE.

Lecture XVIII.

Tetanus—Chemical Injuries—Effects of Heat—Scalds—Burns—Effects of various Acrid and Escharotic Substances: Potash, Ammonia, Lime, Muriatic Acid, Nitrate of Silver.

Local injury, Gentlemen, often immediately produces sympathetic disturbance of the stomach, the heart, or the nervous system. Thus it happens that wounds are accompanied, in many instances, by nausea, a sense of sickness, and even vomiting; with depression of the pulse, and often syncope; coldness, and pains of the surface; with agitation, anxiety, and alarm. Not uncommonly, too, such injuries are attended by rigours: this is an effect which happens on all occasions in which violent injuries are inflicted on the animal economy. Local inflammation is, very commonly, ushered in by chills and shiverings, such as occur during the formation of matter. I do not know that we can explain, very clearly, the mode in which these particular symptoms arise, nor point out, exactly, to which part of the system the occurrence of rigours is to be referred; it would seem, however, that the muscular system is that which is more immediately concerned.

Tetanus.—A serious affection of the muscular and nervous systems, under the name of *tetanus*, is observed as a remote consequence of local injury. The word *tetanus*, which is of Greek extraction, means *tension* or *contraction*; and tetanus may be defined to be a state of spasm, or permanent contraction of some part or the whole of the voluntary muscles.

When we say *permanent contraction*, it must be understood to be used with some limit. The state of the voluntary muscles in a patient labouring under tetanus, is, generally, that of spasm, or continued contraction; but there are occasional paroxysms of convulsions; there are states of occasional relaxation of the muscles, and at those times they are generally pretty much relaxed. We cannot, therefore, in such cases, say that the voluntary muscles are permanently contracted through the whole period that this affection lasts. The state may be considered permanent, when the intervals of even partial relaxation are rare and distant.

Tetanus may be either partial or general. When the muscles of the jaw alone are affected, the case is called *trismus*, or, in popular language, *locked-jaw*; and this latter term, locked-jaw, is used as a common phrase to denote tetanus, without meaning that the affection is confined to the muscles of the jaw. In common language, the word locked-jaw is used as a term equivalent with tetanus, although, strictly speaking, it is only applicable to cases in which the muscles of the jaw are involved. When the muscles of the back-part of the trunk are affected, so as to bend the body backwards, it is called *opisthotonos*. Opisthotonos is a Greek word, implying a state of tension, with incurvation of the trunk backwards. There is no case that can be designated by that term with propriety. There is not any instance in which a tetanic affection is confined simply to the trunk or back part of the body. It happens that the muscles of the back of the trunk are affected, and become tense; and, so far, the trunk may be drawn backwards; and to this extent it may be called *opisthotonos*. In other cases the body is drawn forwards, when the affection is termed *emprosthotonos*. There is a state in which the body may be drawn to either side, and that state is called *pleurosthotonos*. Now, it is common enough to see the case described under the term opisthotonos; that is, the trunk bent backwards; but I cannot say that it ever happened to me to see the body either bent forwards or to the side; therefore, I conceive that those cases called *pleurosthotonos* and *emprosthotonos*

are rather imaginary than otherwise. Tetanus is either idiopathic, that is, it is produced by internal causes, or it seems to arise, in common language, spontaneously; or it is the result of a wound, in which case it is called *sympathetic* or *traumatic*. The progress of the affection differs in rapidity in different instances, and hence it is divided into *acute* and *chronic*. The truth is, that there are hardly any cases that properly deserve the name of chronic. Tetanus, in some cases, is less acute than in others, but it is never protracted or long continued. There is not the same distinction into acute and chronic in tetanus, as there is in inflammation; all we can say of it is, that some cases are less acute than others.

The consideration of idiopathic tetanus belongs to the physician; I have, therefore, only to speak to you of that form of the affection which occurs in consequence of a wound or injury. Traumatic tetanus, then, is the name applied to that form of the disease which derives its origin from the infliction of wounds; and it is observed to arise, more particularly in consequence of wounds of the extremities, happening very rarely, if at all, in consequence of wounds of the head, neck, or trunk. It is produced, most commonly, in consequence of contused, lacerated, or punctured wounds; and it has been supposed to arise, more especially, from such wounds as are attended by injury, with division, laceration, or puncture of nerves.

The truth is, that all wounds which take place in the soft parts of the body, are accompanied with more or less injury to some nerves; so that we cannot have a wound of a soft part without it. I am not aware that there is any direct evidence to show that injuries of nerves are more or less likely to produce tetanus than injuries of soft parts, independently of particular injury to nerves. It has been said that tetanus may arise from nerves being included with an artery in a ligature, after an operation. I fancy that this is an imaginary conclusion. It happens, no doubt, very commonly, that nerves are included in ligatures with arteries which are tied; but, at all events, tetanus in these climates, after operations, is a very rare occurrence.

Tetanus will occur in all states or stages of a wound. It may happen when a wound is in an inflamed or sloughing state; it may happen when a wound is going on very favourably towards healing, and when healing is considerably advanced. It is observed by Sir James M'Grigor, in his account of the Surgical History of the English Army in the Campaigns of Spain and Portugal, that tetanus was observed to take place in consequence of *all* descriptions of wounds, both serious and trivial; both incised, punctured, and lacerated; and that it took place in all their various stages.

It is not an immediate consequence of such injuries; it comes on some days after the occurrence of the wound, and often a considerable number of days after it. Perhaps from five to fifteen days may be stated as the ordinary limit. If the patient have no affection of this kind for the space of about three weeks after the accident, he may be considered safe, free from all danger of tetanus.

Tetanus occurs, in its idiopathic form, more frequently in hot climates than in those which are temperate; it is quite uncommon in the latter, though very frequent in the former. The affection, in the first place, shows itself in the muscles of the jaw, and those that are concerned in deglutition. The patient finds a stiffness in the movement of the jaw; he experiences an uneasiness in swallowing, and he soon finds that he has a difficulty in separating the teeth for the admission of food into the mouth. About the same period, a pain begins to be felt behind the sternum, and this pain extends from the pit of the stomach towards the vertebral column. This pain has generally been ascribed to the tetanic communication of the nervous affection to the diaphragm, although, perhaps, that is rather a doubtful explanation of the phenomenon. The muscles of the back of the neck begin to be affected by the spasm; subsequently those of the back generally; then the muscles of the abdomen, and the abdomen becomes as hard as a board; then the muscles of the limbs, and, lastly, those of the face. When the muscles of the face are affected with tetanic spasm, the features are drawn, independently of the will of the patient, into a peculiar form; very frequently a kind of grin is produced by their action. It is a kind of grin and laughter, but without the will of the patient, so that it is an appearance of laughter, independent of that state of mind which should accompany it, and there is a something very distressing in the effect thus produced.

Now I have mentioned to you, that the state of the muscles affected in tetanus is, generally, that of spasm or permanent contraction. Cullen gives it the name of *rigiditas spasmodicum*—a spasmodic affection; but, generally, rigidity of the muscles is attended with very severe pain; indeed you can easily imagine this, when you recollect how severe a pain is produced by a slight cramp in the legs. The patient labouring under tetanus has a continual cramp, and the sufferings, therefore, are excessive. The affection of the muscles in any part in which it comes on, does not at first reach to the highest degree of contraction, but the muscles become more and more rigid as the affection proceeds. In the first instance,

for example, the jaw is not confined completely; the patient has, perhaps, the power of opening the mouth, but, as the affection proceeds, the muscles become more and more rigid, until the mouth can be opened for the admission of food or medicine, only with great difficulty: and, indeed, it is sometimes necessary to take out one or more teeth for that purpose. The same may be observed with respect to the muscles of the neck and of the spine, and, in some cases, when the spasm is carried to its height, the trunk is forcibly extended, and the shoulders are so drawn back, that you can put your head into a complete hollow upon the spine. This is the state that may be called opisthotonos; when the disease has arrived at its highest, you have this state of permanent contraction—spasmodic contraction of the whole of the voluntary muscles. The muscles of the trunk, the muscles of the abdomen, the muscles of the limbs, and the muscles of the face, are in this state of rigid contraction, and the pain to the patient is excessive.

The intellectual functions are not impaired in tetanus. It is stated by Cullen, too, that the natural functions, that is, the secreting, the respiratory, and the digestive, are unimpaired; but this I consider to be a very erroneous representation. He states, also, that the pulse is not at all affected; that the blood exhibits no alteration when it is drawn from a person labouring under tetanus, or that if it be altered at all, it is rather loose in its consistence. He mentions that the appetite is unimpaired, and that the functions of the digestive system are regularly performed. Now you will usually find that the pulse, particularly in a young robust person labouring under tetanus, is full, strong, and accelerated; that it often rises from 100 to 120 and upwards, at the beginning of the affection. You will find that the blood is buffed and cupped, instead of exhibiting the looseness of texture of which Cullen speaks. There is loss of appetite and most obstinate costiveness, circumstances which are quite inconsistent with the idea of the regular performance of digestion. Indeed, in the treatment of this disease, this costiveness is very troublesome, and frequently tends to obviate the effect of medicines given for the relief of some other symptom.

The pathology of tetanus has, hitherto, been rather obscure. The spasm, and the convulsions of the voluntary muscles, naturally lead us to inquire into the state of the spinal chord, from which the nerves supplying those muscles are derived. This has, of late, been particularly examined into; and in cases of tetanus appearances of disease have frequently been described as having been found in the spinal chord; but I cannot say that those appearances are either sufficiently constant or distinct to lead to any satisfactory explanation. In some cases, small thin plates of ossification have been found upon the arachnoid membrane of the spinal chord, but we can hardly suppose that they have been produced in the time within which tetanus has existed. If any particular state of the spinal chord produce this affection, we should then wish to know how the disturbance of that chord is produced: what is the circumstance which occasions the derangement? Here we are at a loss; we are unable to point out, with any degree of clearness, in what the derangement of the spinal chord consists; nor can we show, in any definite manner, as far as our examinations hitherto have gone, any distinct or clear derangement of that part. It has been observed, that a state of costiveness precedes tetanic symptoms, and Mr. Abernethy has made this a particular subject of inquiry; at least he has pointed out this question as one that should be held in view in the pathological consideration of the subject; that is to say, he has made it our business to inquire, what is the condition of the digestive organs of the patient prior to the occurrence of the tetanic symptoms,—between the receipt of the injury and the development of tetanus? Obviously, himself, being of opinion, that the injury, in the first place, produces derangement of the digestive organs; that that deranged condition of the digestive organs disturbs the spinal chord, and, probably, the whole system; and, further, perhaps, that this derangement of the spinal chord and system is the affection which constitutes tetanus. This seems a rational and probable conjecture as to the mode in which tetanus is produced. We must, however, observe, that this point of pathology is by no means made out; so that the elucidation of the mode in which tetanus occurs, and the exact situation of its origin, are points which remain for future inquiry.

Prognosis.—The prognosis is always of deep importance; though it is much less important in idiopathic than in sympathetic tetanus; indeed, in many cases, idiopathic tetanus is cured, but it is rare, we may say very rare, that traumatic tetanus is cured, that is, tetanus which arises from the infliction of wounds. It is to little purpose, therefore, to enumerate instances in which idiopathic tetanus has been cured, because we find that the same means which have been used in that description of the disease, do not produce the same benefit in cases of traumatic tetanus. The more acute the character of the affection, the greater the danger of the patient; that is, the more rapidly the symptoms are developed, and *vice versa*, the more gradual, the more chronic the

symptoms are, the greater chance is there that the disease may be overcome.

It was observed by Hippocrates, that if the patient survived the fourth day of the disease, there was a much greater chance of his recovery. Dr. Parry states, that if the pulse do not rise above 100, or 110, by the fourth day, there is a tolerably fair chance of cure.

Treatment.—In the treatment of tetanus, the first inquiry that presents itself is, inasmuch as the tetanic symptoms are the consequence of a local cause, that is, of a wound in some part or other, whether the removal of the cause will put a stop to the symptoms; in other words, whether the amputation of any part, for instance, of the finger or thumb, or of an entire limb, when the wound which has produced tetanus is in a limb, will arrest tetanus—put a stop to the complaint. I believe we may say, pretty positively, that it will have no such effect. You have seen already that tetanus may occur when a wound is in a healing state, and when it is making rapid progress to a cure. You cannot suppose, therefore, that the removal of a healing wound would have the effect of putting a stop to tetanus. No doubt the tetanus owes its origin to some condition of the wound that occurred prior to this healing state; but there is no reason, therefore, to suppose, that although the state of the wound, at the time of the development of the disease, was the cause of tetanus, that the removal of the wounded limb would remove the tetanus also. If the cause of tetanus depended principally on the health of the individual prior to the development of the symptoms—if it arose from some peculiar state of the constitution, you could not suppose the removal of a wound would have the effect of stopping it. Yet the removal of the limb, the amputation of the extremity in which the wound is seated, has been recommended and practised, even of late times, by those who have had considerable experience, and more particularly by Larrey, who recommends it in the Surgical History of his Military Campaigns. He, however, advises it only in cases of chronic tetanus, or at the very commencement of those symptoms which are of a more acute kind. He does not give very many cases, however, and I do not find any direct evidence in favour of the proposition. But the trial has been made in many cases, and, certainly, the results, as far as I am acquainted with them, go completely to show that the practice is a bad one, that there is not sufficient chance of arresting the progress of disease, to induce you to perform amputation with a view to arrest it.

In the treatment of tetanus, you will find that very different modes have been adopted, and these have been so various, and so different from each other, as to show that no clear principle of treatment has as yet been discovered. The rigidity of the muscles has led to the employment of antispasmodic remedies, more particularly of opium, and, I believe, of opium in large quantities. Opium does not produce the same effect on a patient labouring under tetanus as it does on a person if he be in health. The state of the patient at that time, renders him very susceptible of its effects; so far, therefore, you can give it in large doses. Dr. Babbington gave 180 grains of opium in eleven hours. An ounce of the tincture opii has been given, many times, in tetanus, in the course of four-and-twenty hours. If you look to cases of idiopathic tetanus, you will find many in which the free and abundant exhibition of opium has been considered to have cured the complaint; but we do not find the same result from opium in sympathetic tetanus. Here, however, it is often employed for the purpose of lessening the severity of the spasm, and often with considerable benefit, so far as that goes. It is not, however, to be considered, if employed alone, as a very powerful or certain means of cure; in combination with other means it may be very useful.

Bloodletting is to be resorted to in tetanus, particularly in the early stage. Patients have been bled largely, and, in certain cases, the appearance of the blood drawn has seemed to justify the operation. The blood is buffed and cupped; and this, in conjunction with the state of the pulse, has certainly shown that bloodletting might be considered as an auxiliary remedy, although, if employed alone, it is not capable of accomplishing the purpose in view. Mercury has been employed very largely, so as to produce salivation. Large quantities of mercury have been rubbed on the body, so as to produce salivation in a short time. This, however, has failed to accomplish the desired effect. Indeed, there are not a few cases in which tetanus has come on in patients who were actually under salivation at the time. The powerful relaxing effect, or, rather, the depressing effect, which tobacco has over the nervous and muscular system, has led to the employment of it in glysters. Musk, camphor, and ether, in large doses—in fact, all kinds of remedies that have been supposed to have any power over the nerves and muscles have been used. Bark, wine, tonics, and stimuli, have been given very freely. Sometimes persons have administered wine in very large quantities; but while this had no effect towards a cure, it has appeared as though the free use of wine did not materially tend to accelerate the progress of the disease.

If we were merely then to look over the recorded cases of tetanus, so as to observe

the means that have been employed, and the effects that have been produced, we should feel totally at a loss for any principle to guide us in its treatment. It appears to me, that the most successful treatment of tetanus has been from the employment of active aperients, in alternation with antispasmodics, particularly opium; that the cases have done best in which powerful opening medicines have been employed from time to time, so as to keep up a continued action on the bowels, and to prevent the recurrence of that state of costiveness in which the disease is generally found to commence; and, at the same time, that opium has been employed to mitigate the severity of the spasms. In many cases, a successful result has been secured by acting steadily on this plan.

The three objects of treatment, then, on which I myself should place reliance, are, first, venesection in the early stage, until the symptoms of general fulness of the vascular system are removed; secondly, the free exhibition of aperients, so as to remove costiveness; and, thirdly, the employment of opium, for the purpose of lessening, or controlling, the very painful spasms. About three or four years ago, I was called to a case of tetanus in which there was very great danger, and where the plan of treatment that I have just mentioned to you, was completely successful, although the case, at the first view, seemed a very unpromising one. It was the case of a gentleman who was about fifty years of age, of a very robust and full habit, accustomed to free living, a man of a very active turn of mind, and who had various and important businesses on his hands. He was pursuing his avocations in a very active way at the time he met with the accident that led to the tetanus, which was in the hottest season of the year. He was riding, when, his horse having fallen, he was thrown forward, and his face coming to the ground, he grazed the dorsum of his nose against the gravel of the road, so as to make a slight wound there; that was the only actual wound he received. He thought so little of the accident, that he did not discontinue his ordinary pursuits, nor change his ordinary mode of living, which was as I said, rather a free one. I do not know that he did more than put a bit of brown paper, with vinegar, on the grazed part. However, although the injury was very slight, yet, at the end of about ten days, when the wound was just getting well, on sitting down to dinner, having asked some friends to dine with him on that day, he felt that he could not use his jaw very freely; he felt some difficulty in masticating, and swallowing his food. He was at length induced, more in conformity to the solicitations of his friends, than in accordance with his own feelings, to send for a medical gentleman, who took a little blood, and gave him some opening medicine. Next day he was very much worse, and I, consequently, saw him. At this time the symptoms of tetanus were very manifest. There was difficulty in opening the mouth, and in masticating; pain behind the sternum extending through to the spine; his pulse full and strong; his bowels had, however, been pretty effectually relieved by the opening medicine he had taken the day previous. I told him that he should go to bed immediately, for he was then sitting up as if he had been going about his ordinary avocations. He was very largely bled, and I prescribed very active medicines. The blood was found next day to be buffed and cupped; the opening medicine had acted freely, and he was better. I prescribed a repetition of venesection, and a continuation of the aperients, being desirous of producing a still further action on the alimentary canal. He took a pretty large dose of calomel and jalap, which was followed up by a purgative draught composed of senna and salts, but, on this occasion, no effect was produced by them. It being a few miles from town, I did not see him in the evening, but the medical gentleman in attendance gave him a large quantity of castor oil, which did not act; he also administered a glyster, but neither did that operate. By the time then that I saw him next day, all these medicines had not acted, and all the symptoms were considerably worse: the neck and back had become affected. I therefore immediately directed the administration of the croton oil. He took a single drop in a teaspoonful of light gruel, and within about an hour, a most violent action was produced in the bowels. He discharged such a quantity of matter of various kinds from them, as altogether astonished him, and all those about him. They seemed to be quite at a loss to know how to describe the quantity. It seemed he had filled and over-filled the close-stool pan (laughter), and that so abundant a discharge had taken place from the bowels, as was never before witnessed. This was followed by considerable relief of all the symptoms, but still the complaint went on, and, in fact, it proceeded to the full development of tetanus over the whole body. The treatment of the case consisted from this time in the regular administration of the croton oil, so as to secure a continued action of the bowels. In the first instance, a drop of the oil did this; but after a time or two more, it required a drop and a half, and then the evacuations were very copious indeed. It was observed by the gentleman in attendance, that if ever he had to prescribe any thing again in the shape of *antispasmodics*, he would exhibit the croton oil, because it had in this instance a much

greater effect than any thing he had ever seen, the muscles which before were very rigid, being soon very much relaxed; indeed the patient himself acknowledged, although greatly depressed and weakened by the effect, the power that it had in relaxing the rigidity. I need not detail the whole of the particulars of this case; it is enough for me to say, that the tetanic affection proceeded until all the parts of the muscular system were involved, and they were as severely involved, as in any case I ever saw. This gentleman frequently remained with all the muscles of the trunk and limbs in the most violent state of rigidity; he then had convulsions of the most serious kind, so that, although he was a man of strong mind and great resolution, he could not at times help crying out most loudly. It was necessary to exhibit in this case opium and hyoscyamus, in order to control those attacks of spasm. I think the benefit of the antiphlogistic plan, and the free exhibition of antispasmodic remedies in the early stage, was so manifest in this respect, that a moderate dose, first of hyoscyamus, and then of opium, was sufficient to afford relief, although, in other cases, where opium alone has been employed, it has not been found to be sufficient. In the first place, a drachm of the hyoscyamus would very much suspend the spasmodic action for three or four hours, and then another would have the same effect We soon, however, found it necessary to have recourse to opium, but we did not go beyond a drachm of it in a dose, and by giving this every six or seven hours, the violent action and great severity of the spasms were obviated; and by the continuance of the two remedies, the regular exhibition of the croton oil and the opium, the complaint gradually subsided, and this gentleman completely recovered. I may mention to you, that his state of tetanus was so considerable, that two or three medical gentlemen who were consulted (his friends wishing to have the judgment of the highest authorities on this occasion), considered the case completely hopeless. This, therefore, is the plan I should myself have recourse to, in the treatment of cases of this description.

Chemical Injuries. Effects of Heat.—The application of heat to the human body will produce, according to its degree, slight or considerable inflammation, together with vesication and other consequences, or complete disorganisation of the part; partial death, or complete disorganisation.

Scalds.—The injury that is produced by the application of hot water to the body, is denominated a scald; the effect that can be produced here is limited, because the temperature of boiling water does not exceed 212 degrees. The transient application of hot water to the body will produce vesication, inflammation of the surface of the skin, effusion of serum under the inflamed surface, and the elevation of the cuticle. If hot water be applied for a longer time, it will produce considerable inflammation of the skin, inflammation so considerable that part of it may mortify or perish, and a superficial slough be produced, just in the same way as in mortification occurring under other circumstances.

Burns.—Heat applied to the body in other forms completely decomposes the parts to which it is applied; reduces it to a dry, brown, charred, substance, which becomes corrugated, shrivelled, or curled up, as far as the other living parts will admit of it. The important points for consideration, therefore, are, the degree and extent of injury in those cases,—the degree of injury, that is, the degree of heat that is applied to the textures of the body; and the extent, that is, the quantity of surface which is involved in the mortification. The prognosis, however, turns chiefly on the extent of the injury, for a slight degree of injury, if it occupy a large surface of the body, will produce very serious effects, while the highest degree of injury, if it be confined to a small point, is of no very great consequence. The nature of the inflammatory process, that is, the inflammation itself, the suppuration, the ulceration, and the granulations which are their consequences, and the mode of managing or treating them, are just the same, in point of principle, as in inflammation produced in any other way.

I should mention to you, with reference to the decomposition, the shrivelling up of the part of the body to which the heat has been applied, that the portion that is thus deprived of life is generally called an *eschar*, from the Greek, *eschara*. Eschara, in Greek, means that part of an altar on which sacrifice has been offered, and which, in consequence, has become charred and discoloured. Hence a portion of the body charred and discoloured has been called an eschar. The word *slough* denotes a portion of the body which has lost its vitality in consequence of that change which is termed *gangrena*, mortification, a loss of part of the body consequent on the want of a peculiar vitality. Eschar is the loss of vitality in a part of the body, in consequence of the application of heat, or some other chemical application. That is the proper distinction between the two terms, although, sometimes, they are used indiscriminately.

Now, when a considerable degree of heat is applied to a large surface of the body, the disturbance immediately excited is fatal within a short period of time. If you consider how serious a degree of local uneasiness, and how much febrile disturbance, are

often produced, even by a boil, that is, an inflammation coming to a small point in the skin, you will not be at all surprised to find, that patients should die very quickly, if nearly the whole of the skin be seriously burnt. In cases where the injury is less considerable in point of extent, violent sympathetic disturbance of the respiratory organs and of the stomach is produced; breathing is carried on very imperfectly; it is laborious; the pulse becomes irregular; coldness and shiverings are produced; there is excessive thirst; and, in fact, the patient sinks in a few days, in consequence of the injury. Where the symptoms are not such as to endanger life, there may be very serious injury produced to the parts which are burnt. Hence deformity may ensue, or the office of the part may be considerably impaired. Deformity and impeded motion, or function, therefore, are found, very frequently, to take place from burns where life is not at all in danger.

Treatment.—In the treatment of burns, so far as the local management goes, two apparently opposite plans are frequently had recourse to. In the first place, when the injury is slight and superficial, we apply cold. If heat have been applied to a part of the body, so as to produce inflammation of the skin without vesication, the application of cold will, perhaps, check the progress of the inflammation, prevent vesication, and occasion a speedy disappearance of all effects. Cold water, saturnine lotion, and vinegar and water, may be applied for these purposes. Sometimes it has been proposed to use spirit and æther, in order to increase the evaporation. Scraped potatoe is a popular mode of applying cold to the surface in cases of this kind. If, in consequence of the cold, the patient becomes chilled, and is inconvenienced, of course it must be discontinued. You may then employ, particularly if vesication have taken place, or ulceration be likely to follow, either a soft poultice or the common application to a burn, that is, the *liquor calcis*, which keeps the part in a very comfortable state.

It is often a question, whether you ought to open vesicles or leave them untouched. The truth is, I believe, that this is a point very often of little consequence, if you do not detach the entire skin. If inflammation go on, ulceration will be produced; the opening of the vesication is of no particular advantage.

Now, in many serious cases of burns, there is very considerable depression of the powers of the system. The pulse sinks and becomes feeble. There are coldness and shiverings. In fact, that state is produced in which the application of cold is quite out of the question. Nobody would think of applying cold to a patient in the state in which he is found after a very severe and extensive burn; it would be the way to extinguish the feeble remnants of vitality to a certainty. Here the state of the system is the main object of attention. If you have a slight, superficial burn, and attend merely to the local treatment, that is the only point about which you need be anxious; but when you have got an extensive injury, and the patient is in the very dangerous condition I have mentioned, your main object is to attend to the state of the system. The treatment recommended by Dr. Kentish, in such cases, is the most applicable. He founds his treatment on the analogy between what should be done on the application of heat to the body, and the course of proceeding to be adopted, where the body has suffered from excessive effects of cold. Now I have already had occasion to mention to you, that where a part suffers from cold, it is quite wrong suddenly to apply a great degree of heat. Dr. Kentish says, in the same way, where the temperature of the part has been very highly raised, that you should gradually lessen it to bring it down to the temperature of the sound state. Whether this is exactly so or not, it, perhaps, is not necessary to enquire. His treatment is very successful, however, and it is that of washing the part over with the turpentine liniment, and then covering it with cloths dipped into the liniment, the liniment being made of the oil of turpentine, and white basilicon. This is a stimulating application. In conjunction with this, the employment of opium is to be had recourse to, in order to relieve the external pain, and the administration of either a little wine and water, or brandy and water, where there is that faintness which frequently occurs. This is the mode of treatment which has been proposed in cases of extensive burn, by Dr. Kentish, who had great opportunities of seeing them in their worst forms, having practised in the neighbourhood of coal-mines, where extensive injuries of this sort are of very frequent occurrence.

In the subsequent treatment, the application of the turpentine liniment is continued until ulceration and suppuration commence, and then other milder applications are proper. You treat the wounds on the principles already detailed. You may apply a soft poultice, and when granulations commence, you may treat them according to the plan applicable to ulcers.

Of course you are not to continue the internal stimuli longer than the existence of the circumstances which require them. You would not think of giving a patient under disease of this kind, wine, opium, or brandy, for any length of time. As soon as the state that calls for these is past, you would discontinue their employment.

Now, the general treatment of burns will

differ very considerably, for the causes of these accidents are various. Sometimes the injury produced by the application of heat, creates considerable excitement. It is necessary then, to employ pretty active antiphlogistic means; to take blood, etc. Frequently, a state of excitement comes on in scalds, about the time when ulceration and suppuration commence. I remember not very long ago having in this hospital two instances of men who had scalded the lower extremities very extensively, in both of whom, when matter began to be discharged from the surface of the wounds, there was violent febrile disturbance, and it was necessary to bleed them very largely, and repeatedly.

In the progress of those cases towards cure, when ulceration commences, and when the parts that have lost their vitality are thrown off by this process, you will find that the completion of the cure takes place with very different degrees of rapidity. It sometimes happens, particularly in scalds, that the external stratum of skin loses its vitality, and sloughs, but that the sloughing process does not extend through the whole thickness of the skin; there is only a destruction of a part of the surface. Under such circumstances the ulcer which is left after the detachment of the superficial slough, is, in fact, only an ulcer of part of the skin, and as soon as such slough is detached, you will find that, almost immediately, the surface of such a sore will heal. In fact, this is not like an ordinary sore, which can only commence healing from the edges; it is only a sore of part of the skin, and you will frequently see ulcers of very great extent under such circumstances, perhaps double the size of the palm of your hand, cicatrise over in twenty-four hours. Now, in those instances in which the whole of the skin is defaced, so that the loose cellular membrane is exposed, you find that the production of loose granulations is very great; that those granulations are very exuberant. They arise above the surrounding skin, and difficulty is experienced in keeping them down, and, consequently, in effecting cicatrisation. Indeed, I do not know any case that is more tedious in healing than a case of that kind.

It is necessary you should pay particular attention to the position of the affected part. In many instances of burns, you will recollect that the granulations which are produced in healing a sore, become absorbed after the cicatrisation has been accomplished; then the parts are contracted, and, consequently, when any part of the body is burnt where there is a bend, as there is at a joint, you will find, that if you allow that part to remain in the bent position, this contraction and absorption of the granulations will unite the two portions of the limb together in such a way, as to fix them permanently in the bent position, and thus to produce not only a degree of deformity, but a very serious diminution of the action of the joints afterwards. If you were to allow the fore-arm and arm to remain bent when the two surfaces were in a state of granulation, they would unite together by the inosculation of the granulations, to a very considerable extent, and thus you would have a sort of bridle formed by the cicatrised integuments, confining the limb in a bent position. In the same way the jaw may be drawn down even to the sternum, when the neck has been burnt; and thus a most serious and dreadful deformity would be produced. Under all circumstances, therefore, attention to position of the part during the time the granulating process is going on, is absolutely necessary.

In instances where this point has been neglected, where contraction has arisen in consequence—where a bridle of cicatrised integuments has been produced, relief has been obtained by dissecting out the portion that forms the bridle; and, when the skin on each side is round, so that it can be brought together after the cicatrix has thus been removed, the use of the part has, in many instances, again been very completely restored. We are indebted for this mode of treating this condition of parts after burns, to my colleague Mr. Earle; he first directed attention to it, and, in many instances, he has succeeded in removing very serious and very extensive contractions, by that simple mode of proceeding.

There are two modes of treating burns, which have lately been proposed, which I have not myself had an opportunity of trying, but which have been proposed on such respectable testimony, that I think them worthy your notice, and I should myself be inclined to give a trial to them. The one is a remedy of which, perhaps, one would not easily have thought—the application to the burnt surface of raw cotton. It was first employed in America, and from the following circumstance. A child had been extensively burnt, and there were no means at hand for the treatment usually adopted in such cases. In order to put the child quietly out of the way, he was laid in a basket of cotton. It was found that the pain seemed soon to be diminished, and the child continued quite quiet. They took the hint, and suffered the child to remain, covering it lightly over with raw cotton. The pain went off, and although the burn was very considerable, the case did very well. This has led in America to the practice of covering over the parts with raw cotton, putting a slight covering over them. When the discharge commences, the covering which has been thus placed upon the parts, forms a

sort of cake. If the discharge seem to be oozing out, a fresh quantity of the cotton may be applied, and thus the parts heal entirely under this cake, and no further treatment or dressing is required. I believe that in some instances in which this plan has been tried, it has been found to answer very well. The other plan of treatment which I have alluded to is, that of covering the parts over, copiously, with fine wheaten flour.* Taking an ordinary flour-dredger, as it is called, that is, a tin receptacle, the top of which is perforated with holes, you sprinkle the parts over until they are covered with a thick stratum of the flour; in fact, proceeding with it just in the way I have mentioned to you with respect to the cotton. This has been stated to be an effectual, a very effectual mode of treating burns, but I have not myself had any experience on the subject.

Effects of Acrid and Escharotic Substances.—There are various chemical substances which are stated to have the effect of immediately decomposing the textures of the body. The effect of *pure potash* is well known to medical men, who are in the continual habit of making use of it. *Ammonia, lime, strong acids, nitrate of silver, muriate of ammonia*, all these various substances are employed as *escharotics*, as they are called, that is, they make an eschar. They decompose, they burn or destroy, the part of the living body to which they are applied, converting it into a brown or dark-looking substance. They all deprive the part to which they are applied of life, although they do this each in its own peculiar way, that is, the appearance of the part after the application of the substances, varies in each particular instance. The action of lime is peculiar in some instances. Lime, when applied to the cornea of the eye, completely destroys its transparency, and reduces the animal substances with which it comes in contact, into a fine powder; it renders the cornea as completely opaque as a portion of marble. The peculiar effects of the nitrate of silver are well known; it produces a whitish film over the part. The truth is, that nitrate of silver is decomposed when it comes in contact with any animal discharge; for all the animal fluids contain muriatic acid, and the muriatic acid decomposes the nitrate of silver, so that a muriate of silver is formed, which is the whitish kind of substance that is seen after the nitrate of silver has been applied.

* This plan of treatment was first communicated to the profession through the pages of THE LANCET, in a letter from Dr. Ward of Manchester.

EDINBURGH UNIVERSITY.

CLINICAL LECTURES IN MEDICINE

BY

DRS. ALISON and GRAHAM.

ALTERNATING PECTORAL AND CEREBRAL AFFECTIONS.

Monday, Jan. 4th, 1830.

DR. ALISON.—J. Tyndall, ætat. 42. He was admitted on the 14th November, affected with two diseases of very opposite character and mutually obscuring each other; the leading and most urgent symptoms were attributable to inflammation within the head; there was much pyrexia, intense headach, intolerance of light, inquietude, and sleeplessness, but no delirium, comatose disposition, paralytic affection, or spasmodic contractions. That pectoral disease also existed to considerable extent (though at the time equivocal and obscure), was shown by the history of the case; for some winters the patient had been liable to troublesome cough, which of late had increased to an unusually violent degree, and had been accompanied by purulent expectoration; however, on the occurrence of the head affection, the thoracic symptoms abated, and became comparatively but of trifling inconvenience. Again, when the cerebral symptoms had subsided, the thoracic disease became evident, and in the course of a short time, he sunk into a state of weakness (free, however, from coma or paralysis), which soon terminated his existence. On dissection, the usual appearances of phthisical lungs were present to a great extent; and on the inferior surface of the cerebellum behind the medulla oblongata, was found a large tubercular tumour of round shape, of about the size of a musket ball, of a pale-yellowish colour, and homogeneous firm structure. The cerebellum, in its immediate vicinity, was red and softened, and the lateral ventricles contained six drachms of fluid. Dr. Alison observed, that with respect to this case, the first thing worthy of attention was, the fact of the pectoral disease having been *apparently* arrested in its progress by the supervention of the head affection, and its again becoming more evident when the head symptoms had abated; such an occurrence, although rare, had not escaped the observation of physicians. The late Dr. Gregory had seen one such instance, and Dr. Storer had published a paper on the subject, in the Medico-Chirurgical Transactions. It was unnecessary to suppose here, that the disease in the head had concealed the pectoral affection, as decided phthisis not only often remains latent for a considerable time, but

occasionally remits in its progress. As to the head affection, the symptoms at the commencement were nearly those of acute hydrocephalus; but the case terminated fatally without coma or convulsions, and appearances were found on dissection which, though they might have been satisfactory in hydrocephalus which had run its usual course, yet here were not reconcilable with the symptoms during life, especially as far as the tumour was concerned; in fact, this appeared to be one of a numerous set of cases, which concurred in casting doubt on the pathology of the nervous system; cases in which compression or disorganisation of the brain or cerebellum had taken place to a great extent, and neither delirium, spasm, nor coma, had supervened. The only answer to these objections was, that the parts essential to sensation and voluntary motion, namely, the origin of the nerves, had not been injured,—as it appears from the experiments of Fleusen, read before the Institute of France, and confirmed by Cuvier in his report on the subject, that the whole of the hemispheres of the brain or cerebellum, may be removed in some instances, without affecting the functions of sensation or voluntary motion, if the origins of the nerves be left uninjured.

SCABIOUS ERUPTION OF THE UPPER EXTREMITIES TREATED BY PUNCTURES.

Dr. Ailson then adverted to the case of James Downie, ætat. 29, who was admitted on the 13th December; he then laboured under two distinct diseases; the trunk, neck, and superior extremities, were covered with a thin eruption, pustular in some places, and desquamating in others, but, on the whole, decidedly scabious, and, like scabies, benefited by the subsequent use of the sulphur ointment. Besides this, the left leg was occupied by a diffuse, florid, and evidently erysipelatous efflorescence, which had originated in a slight wound inflicted on the tibia by the kick of a horse. Sometime previous, he had a venereal affection, which Dr. Alison thought entirely unconnected with his present disease. On admission, the erythema was of three days' duration; and had been ushered in, and was still accompanied, by well-marked pyrexia. He was immediately bled, and had purgative medicine, and the next day the febrile symptoms had all subsided, and the eruption on the leg had ceased to spread; but the swelling and redness continued as extensive as before.

In this case no danger was to be apprehended, either from the local affection or the general disturbance of the system; suppuration, perhaps, might be apprehended in the leg, and such a termination was, probably, not to be averted by further general blood-letting. It might, however, be influenced by local depletion, and for this purpose Dr. Alison considered numerous punctures were most suitable in such a case *as this*. Leeches he thought scarcely applicable, and incisions were, at the same time, excessively severe, and more suitable to an advanced period of the disease, where suppuration or sloughing of the cellular membrane had occurred. Punctures were accordingly made, and about six ounces of blood were obtained from the wounds; the practice proved eminently successful, for, by the next day, the erysipelas had nearly disappeared, and in less than a week he made no complaint but of slight irritation in the original wound on the tibia.

SUPPOSED INFLAMMATION OF THE DIAPHRAGMATIC PLEURA.

He next alluded to a case in which, as often happens, an inflammatory affection in some of the parts beneath the right hypochondrium, and corresponding to the lower ribs of the same side, rendered the diagnosis between pleuritis and hepatitis a matter of some perplexity. There were pain and tenderness along the margin of the ribs, not affecting the intercostal space, and, apparently, connected with an injury the patient had received some time previous in the same situation. From such pain, or from the state of respiration, no discriminating mark could be established between the two diseases; but by the evidence afforded by auscultation and percussion, and the catarrhal character of the accompanying cough, Dr. Alison was inclined to consider the symptoms as most probably resulting from inflammation of the pleura, where it is in contact with the diaphragm. After the application of leeches the pain quickly subsided, and, at the last visit, the stethoscopic phenomena tended strongly to corroborate the previous opinion of Dr. Alison as to the seat of the disease. The state of the respiration at present leads him to believe, that the lung below the seventh rib is impervious to air; perhaps from compression by fluid, or plastic lymph effused over the diaphragmatic pleura; if so, the part will very probably continue solidified during life, and, perhaps, become the predisposing cause of a repetition of similar attacks.

CURE OF OTALGIA.

Since the preceding report, a patient had been admitted, and again dismissed cured of rather severe otalgia, characterised by intense pain in one ear darting across the brain, accompanied by considerable impatience and irritation. Such a case, Dr. Alison said, should invariably be treated with extreme attention; for though it would usually terminate without ill consequences, even when left entirely to itself, yet inflam-

mation beginning in this way, was known by ample experience, to spread with great rapidity to the internal organs, involving the membranes of the brain, and often inducing caries of the petrous portion of the temporal bones. In every case, therefore, in which symptoms of pyrexia occur, and the pain is felt as if darting through the head, venesection, and other antiphlogistic remedies, should immediately be put in practice; for any ill that could result from a moderate detraction of blood, although absolutely unnecessary, would be amply compensated in really serious cases by the probable advantages. The patient was accordingly bled; since then, slight suppuration from the ear has taken place, and all the symptoms have rapidly disappeared.

DYSPEPSIA.

William Bruce, ætat. 43, was admitted 1st January, affected with severe dyspeptic symptoms, very similar to those described in the cases of stomach disease, related in a previous number. Besides the usual symptoms of indigestion, this man had severe pain and tenderness of the epigastrium, and decided evidence of, at least, increased irritability of the mucous membrane of the stomach, the pain being greatly aggravated by cold drink and vomiting occurring about two hours after taking food. The character of his pulse exactly coincided with that to which Dr. Alison had repeatedly called the attention of the class in these affections; it was slow while the pain was most urgent, and *vice versa*. He had (previous to admission) taken repeated doses of purgatives, without relief. He said his disease was but of three weeks' standing; if his account be not underrated, the case is peculiar, inasmuch as pain and tenderness but rarely supervene on dyspepsia at so early a period. Dr. Alison thought there was little doubt here of the existence of a state approaching to inflammation, which might, perhaps, lead to thickening and induration of the pyloric extremity. However, he should observe, that the single symptom of tenderness, was by no means sufficient to establish the fact of inflammation here, as such a sensation very generally accompanied distension, produced by any cause. Cases like this, Dr. Alison continued, he had known to yield rapidly to general or local blood-letting. In cases more obstinate he had seen mercury employed with great apparent advantage. The quantity of blood generally necessary to be drawn, is not great; he had known relief usually to follow the loss of 12 ʒ, and Dr. Wilson Phillip states the same. This patient, however, has been treated as yet with leeches, laxatives, an antacid mixt., and calomel and opium at night, and there is every reason to expect a favourable issue of the case.

PNEUMONIA AND PLEURITIS.

Thomas Rogers, æt. 27, admitted 2nd December, with tolerably well-marked pneumonia, and very possibly pleuritis; he had acute pain of right side of chest, greatly aggravated on the attempt at full inspiration, frequent cough, and mucous pneumonic spulum; pulse full and very frequent; nausea and vomiting, with pain and tenderness of the right hypochondrium. This group of abdominal symptoms, Dr. Alison said, might lead to the belief that the liver was the affected organ, but he had frequently seen them occur in indisputable cases of simple pneumonia, many circumstances too concurred here to point out the seat of the disease; he would particularise the pneumonic spulum, the dull sound on percussion, and indistinct character of the respiratory murmur, as far as the fifth rib, and the existence of sonorous rales in different places, all of which he considered as unequivocal proof of pectoral disease.

The crepitating rale had not satisfactorily been observed, but he did not consider it by any means an infallible guide, at all events it was transient in its existence, and liable to different sources of confusion. In a practical view, however, the seat of the inflammation was of little moment, as our measures should be directed, not against the *seat*, but against the *nature* of the disease; he had been bled to 46 ʒ, which, perhaps, in a young patient might be the average quantity necessary to subdue pneumonia. He had also used calomel and opium, in preference to the antimonial solution, generally employed in this disease. Calomel and opium, the students were aware, were warmly recommended by Dr. Hamilton of Lynn Regis, and he, Dr. Alison, had often noticed the efficacy of this medicine; in most cases he was inclined to attribute its virtues to a strong sudorific action, which it usually excited; in this instance he was induced by two reasons to prefer it to tartar emetic; first, on account of the vomiting and nausea already present, and secondly, lest he should have been mistaken in his diagnosis, and the liver happens to be affected, in which case the mercury might prove of specific service. Under this treatment great improvement has taken place; and the irritability of stomach having been allayed, the calomel and opium were discontinued to-day, and the tart. emet. solution in very small doses was employed in its stead.

PYREXIA.

Dr. Alison next observed that one of the patients in the short ward (M'Master) had suffered a relapse during convalescence from an attack of fever, which had been considerably retarded by an irritable state of the bowels. On the 27th Dec. he was suddenly seized with rigours, and severe stitch

in the left side, which yielded to the application of leeches. On the 29th fresh rigours occurred, and since then the pyrexia has increased without any concomitant local pain; there are considerable general irritation and restlessness, but he is free from delirium; the pulse is very frequent (130), extremely compressible. After an opiate he slept and diaphoresis ensued, but the pyrexia continued unabated, and under all the circumstances Dr. Alison feared his recovery was very doubtful. At present there is no diarrhœa, and the tongue does not present the florid appearance usually met with in diseases of the abdominal mucous membrane; nevertheless, in a young patient like this, an inflammatory tendency in this situation may be suspected, perhaps especially connected with the mucous glands of the lower intestines, which eventually might proceed to ulceration and sloughing. Such diseases often occur, it is true, in a concealed and insidious form, and under circumstances similar to the present, but the suspicion alone is not sufficient to justify any peculiar or active practice.

Tuesday, January 5.

DISEASE OF THE HEART.

Dr. Graham referred to the case of Isabella Whitehead, ætat. 55, admitted 22d of December, and which had since terminated fatally. She complained of great dyspnœa, cough, and palpitations, increased by lying on the left side; even moderate pressure on the abdomen, caused the sensation of threatening suffocation; her sleep was disturbed by starting, and she awoke in great anxiety; the lower extremities were œdematous, as was also the right side, perhaps from her constantly lying on it. The account she gave of the history of her illness was so vague and imperfect, that but little satisfactory information could be derived from it; she stated, however, that it was of six weeks' duration; dyspeptic symptoms also existed to a considerable extent. In this case there was unequivocal proof of diseased heart, though he should observe that many of the symptoms were only indicative of impeded transmission of blood in that organ, or in the lungs, which might arise from various other causes, as well as structural alteration of the heart or its great vessels; thus, though palpitations were readily excited by exertion, emotion, &c., this did not point out to us the actual seat of the affection; cough existed to a considerable degree, and hæmoptysis had occurred, yet these went no further in proving the actual cause of the present symptoms; in like manner, the dyspnœa and livor of countenance were no more decisive, as the same appearances are seen in hydrothorax, hydrops pericardii, phthisis, &c.—in fine, even the œdema gave us no precise information, as it might have been produced by obstruction in various parts of the venous system. At first he was inclined to attribute the symptoms to hydrops pericardii, partly on account of his having mistaken the statement of the patient as to the side on which she lay with difficulty, and partly from the diffused palpitations which are apt to occur in that affection; but more lately he was induced to alter that idea, as he would presently explain; and to attribute the complaints to disease of the heart or large vessels, the chief characters of which, in this case, were the violent action of the heart, and monstrously rapid pulse; 192 beats could be counted in the minute, by applying the hand to the thorax; but, at the wrist, there was no perceptible pulsation. This remarkable circumstance might be referred to regurgitation of the blood into the left ventricle, and he was, therefore, induced to anticipate that a *post-mortem* examination would show enlargement of the arch of the aorta, and disease of the semilunar valves; the subclavian arteries, especially of the left side, pulsated evidently and violently, (on the right this symptom was obscured by an old fracture of the clavicle, but the effect was observable in the axillary artery,) which tended further to corroborate the opinion. On such a supposition, the various phenomena admitted of easy explanation, the reason of the increased action of the heart itself and the subclavian arteries, of the decreased action at the wrists, and of the several general appearances, was sufficiently manifest; but, said Dr. Graham, the patient is now dead; we have examined the heart, we know that most, if not all of these suppositions and anticipations are wrong; and whence are we to derive an explanation of the symptoms during life, and to reconcile them with the appearances found on dissection? On these points some information, but not by any means altogether satisfactory, could be obtained from the narrative of the examination, to which he would call the attention of the class as soon as he had briefly alluded to the practical bearings of the case.

In the treatment, then, there were two indications to be kept in mind, namely, to diminish general irritation, and to lessen the rapidity of the circulation: with the first intention, opiates and nitrous æther were used (the latter, at the same time, as a diuretic and antispasmodic), laxatives and enemata were also employed with the effect of inducing copious evacuations of solid fæcal matter; at a later period the injections were given to relieve dysuria, which had become a source of much uneasiness. This point, Dr. Graham said, merited some notice, es-

pecially as it was connected with a subject of much delicacy in private female practice, namely, the introduction of the catheter, an operation, he said, generally submitted to with extreme reluctance, and which, in most cases, might be rendered superfluous by the use of laxative and emollient enemata. With the second view, or for the purpose of lessening the action of the heart, ten drops of the tinct. digitalis were given four times a day; for two days no effect was produced; on the third day the pulse had become perceptible at the wrist; on the fourth it was perfectly distinct, and the inordinate action of the heart considerably abated. This sudden relief, and the return of the pulse to the wrists, he confessed it was extremely difficult to explain, as it was by no means easy to understand why the extreme arteries should present pulsation in the inverse ratio of the heart's action; the pulse being absent when its contractions were violently accelerated, and again returning as they became more equable and composed. As by this time considerable depression had taken place, he discontinued the digitalis; under other circumstances, he would have next allowed a little wine, but he was willing to wait until it could be ascertained whether any permanent good was to be obtained from a continuance of this depression; however, after the visit on Saturday, she became rapidly weaker, and sunk in the course of the night.

On dissection, the adipose tissue was found very abundant throughout the body, especially in the neighbourhood of the heart and large thoracic vessels; 4 pounds of serum were effused in the cavity of the abdomen, old adhesions existed between the diaphragm and the left lobe of the liver, and between the pulmonary and costal pleuræ; fifteen ounces of serum were found at the left side of the chest, seven at the right, and two in the pericardium; the mitral valves were irregularly thickened and shortened; the insertion of the semilunar valves of the aorta were slightly hardened and prominent, but, in every respect, competent to their natural functions; there was a seemingly slight dilatation of the aorta at its commencement, but this was certainly very equivocal; on its inner surface there were a few specks of incipient ossification; the lungs were partially hepatized.

From the plethoric state of the patient, and the unusual collection of fat in the vicinity of the heart, some explanation of the symptoms might be deduced, particularly of the sensation of suffocation produced by the compression of the abdomen. In order to show better the shortened state of the mitral valves, he brought the heart of another subject to compare with that under consideration, and the contrast would more clearly show the diseased condition of the latter (the specimens were handed round for inspection). The main cause of the symptoms was to be found here—at least as far as dissection gave an explanation of the case, that portion of the mitral valves being principally affected, which mainly prevents the return of the blood into the auricle; hence regurgitation took place, and in the disturbance of the heart's action which ensued, it was easy to trace the nature and causes of many of the symptoms.

It is unnecessary to follow Dr. Graham through the application which he made of this diseased condition to the explanation of the palpitations, pulsation of subclavians, dyspnœa, &c. He concluded, by observing that, on the whole, the extent of disease was less than the violence of the symptoms would have led us to anticipate, and that the absence and renewal of pulsations at the wrists, under opposite states of the heart's action, received from the dissection no elucidation whatever.

Thursday, 7th January.

ACUTE RHEUMATISM, WITH PERICARDITIS.

Dr. Alison said, there were three cases admitted; the first was W. Caidey, æt. 21, taken in 4th January, on the third day of a febrile and inflammatory complaint, the seat and nature of which it was not easy to ascertain. He complained of pain in various parts,—in the head, back, and extremities, aggravated by every motion; the chest was also affected, there being considerable pain in the right side, increased by motion, inspiration, and coughing; he also suffered from a violent dry cough. Previous to the night of his admission he had been twice bled, and the symptoms were not so urgent as they became next day, when the pulse rose from 92 to 120, and assumed a sharp, vibrating, and thrilling character; the heart's action, at the same time, became violent,—so much so as to be readily seen from a distance, and the pulsations at the radials were also distinctly visible. All these, together with the previous rheumatic symptoms, gave reason to apprehend the existence of pericarditis. He was immediately bled to 18 ʒ, and the pulse at once lost the jarring feel; 28 leeches were then applied to the chest, as the pain in the right side continued. At this time the sound on percussion over the heart was not unusually dull, nor could it be expected at so early a period of the disease. At night the pain was increased, and he was bled again to 18ʒ, with great relief; since then there has been no more inordinate action of the heart, but there remain some pain and tenderness of the abdomen, perhaps from rheumatism of the abdominal muscles; 12

leeches have also been applied to the temples on account of the headach, which caused considerable distress. To-day he is much better in every respect; the pulse has fallen to 80, and is free from the vibratory character.

The only name he could give this set of symptoms was acute rheumatism, with a tendency to pericarditis; at the same time it must be acknowledged, that cases of this nature are seldom so soon relieved. The only other practice pursued was the use of laxatives and antimonial solution, in quarter-grain doses, at sufficient intervals.

The next case was Edward Brookes, an old man, affected with intermittent fever, not very regular either in its interval or paroxysm; sweating seldom occurred, and in fact the nature of the disease might be questioned, but for the fact of his having been exposed to its most usual predisposing cause, namely, marsh miasmata, in the fens of Lincolnshire, and his having been twice before affected in the same manner. He also laboured under a chronic bowel complaint and catarrh. He has been ordered the sulphate of quinine, and, as far as the intermittent is concerned, will probably do well.

The case next to be mentioned, Dr. Alison said, was that of James O'Keil, one in which the danger was considerable. The patient was admitted into the ordinary physician's ward, on the 2nd inst., having been brought in comatose from the police office, where the stomach pump had been employed, as, when found by the police, he evidently laboured under the bad effects of excessive drinking; his pulse was then small and weak; the countenance pallid and extremely cold; in a short time he rallied, and complained of great headach and nausea, vomiting ensued, and the epigastrium became very tender to the touch. A blister was applied to the epigastrium, and a little wine allowed. Next day he was better, but appeared to be taking fever; the day after that, he complained of acute pain under left false ribs, with distressing hard cough; the pulse was 120, sharp and incompressible; he was bled to 20¾, and had the tart. emetic solution, which he soon vomited; he was also cupped over the side. On the following day the pain was quite gone, and the sonorous and sybilous rales (previously heard very extensively) had diminished, and he insisted on leaving the house.

After going home he was seized with rigours, and returned to the hospital next day with all his former complaints much aggravated; his respirations were five, and wheezing; his skin hot and dry; pulse 120, small and compressible; sound over the left side dull on percussion; the stethoscope, in several places, indicated the subcrepitating rale, and in others the true crepitus was distinct. Here then, Dr. Alison proceeded, the symptoms both general and stethoscopic were decisive of inflammation of the bronchiæ and pulmonary texture, yet there were no characters indicative of strong reaction; in particular the patient had the dry tongue, which is so rarely present in active inflammation. Under the circumstances, however, it was plain nothing but venesection could save him; 16¾ of blood were taken before one o'clock (7th), but as there was no abatement in the symptoms he was bled again before three P.M. The antimonial solution was given, and the first doses produced vomiting and purging; at night he became delirous, which was well known to be a very bad symptom in pneumonia. To-day the case closely resembles one of bad fever, from the delirium, dry tongue, and comatose disposition; this depression, however, it is very likely, results from the excessive quantity of spirits taken before the commencement of his illness; however, in some respects he is better to-day, the breathing is but 36, still nearly double the natural number; it is also less noisy, and the anxiety of the countenance is diminished. Dr. Alison was of opinion, that further depletion was safe and necessary, especially by local means; leeches have, therefore, been applied to the sternum, and the antimonial solution has been resumed; he could not, however, advance with confidence the slightest hope of a favourable termination.

SKETCHES

OF THE

MEDICAL PROFESSION IN PARIS.

No. I.

M. AMUSSAT.

The extended intercourse which has taken place between the British and French capitals, since the peace of Paris, has diffused a pretty general knowledge of the speculations and labours of continental medical practitioners amongst their brethren of this island. A few biographical memoirs from the Parisian school, may not, perhaps, be uninteresting to our readers; and it is our intention, therefore, to present them with occasional sketches of the most distinguished physicians and surgeons with whose works we are familiar. Amongst the most industrious contributors to science, within the last ten years, Dr. Amussat will be found prominent; his name is distinguished by the frequency, if not the brilliancy, of his publications. The ligature of the sper-

matic arteries, as a means of treating varicocele; the passage of straight catheters through the urethra; the destruction of calculi in the urinary bladder; the high operation of lithotomy; and the torsion of blood-vessels, as a means of arresting hæmorrhage; have each, in turn, formed the subject of voluminous memoirs. It has been a fashion amongst the contemporaries of this gentleman, to stigmatise his proceedings as savouring of charlatanism. The important results, however, which have attended his exertions, form a triumphant answer to this calumny. Dr. Amussat, the son of a considerable farmer, was born near Poictiers, in the beginning of the year 1788. His early education was neglected, and he was placed, under very disadvantageous circumstances, with a pharmacien of Poictiers. Whilst with this gentleman he attended the "Ecole Secondaire" of that town, where he made some progress in anatomy and surgery. Disgusted, however, with the service in which he was engaged, he quitted his instructor, and about the end of the year 1805, he was so fortunate as to be received into the army as a "sous-aide-chirurgien." He served several campaigns in Italy and Germany; and at the peace in 1814, proceeded to Paris for the purpose of completing his education. He was soon noticed for his industry and perseverance, and was enabled to eke out his scanty means by becoming a prosateur, and instructing the junior students. English pupils, in particular, resorted to Amussat (whose versatile manners were soon reconciled to our national peculiarities), and contributed greatly to the increase of his income. In 1818, he took out his doctorat in surgery, and since that time has acquired a very large practice.

The attention of Dr. Amussat was early turned to the subject of lithotomic operations; the first result of his labours was a demonstration of the straightness of the urethral tube. This idea first suggested itself to his mind on a lateral view of the pelvic viscera with the bladder *undistended*. The faulty method generally adopted of showing the relative position of these organs, by distending to the utmost the bladder and rectum, had contributed to perpetuate this error. The Institute of France afterwards awarded him a prize of 2000 francs for this important discovery.

In May, 1822, Amussat presented to the Academie Royale, an instrument which he had invented for the destruction of calculi in the bladder. The "*brise-pierre*" consisted of a straight tube, about three lines dismeter, and having two branches with which the stone was to be seized and destroyed. Its introduction in its then-imperfect state, was found to be fraught with too much danger, and this instrument was laid aside until the more recent improvements of Heurteloup have rendered it again available in the shape of the "brise-coque." The more happy invention of Dr. James Leroy, the "instrument à trois branches, avec le foret simple," obtained the preference over Amussat's brise-pierre, and was, with one or two unimportant modifications, adopted by him. With this instrument Amussat has performed the lithontritic operations several times, and is considered, in that branch of surgery, a successful rival of Leroy and Civiale.

This gentleman considers the lithontritic process to be inadmissible, under the following circumstances:—

1st. When the subject is very young, or the urethra not large enough for the easy introduction of an instrument.

2. When the stone is voluminous.

3. When the bladder, prostate gland, or kidneys, are diseased; or where there exists a serious affection of any of the organs important to life, such as the heart or lungs.

4. In old men, who have a long time supported the presence of a stone, and whose urine is continually charged with glaire. In short, the "brisement" is only applicable, with favourable chances of success, when the patient enjoys a good state of health, and is not much inconvenienced by the presence of the calculus. In all other cases M. Amussat recommends the supra-pudendal section.

In his memoir, read to the Academie Royale de Medecine, at the séance of the 27th December, 1827, this gentleman states: "The plan which I adopt in reaching the bladder through the epigastrium is sufficiently simple, and may easily be understood by those who have an exact knowledge of the true form and position of the bladder. I think that the fear of opening the peritoneum prevents many surgeons, who operate by the perineum, from attempting my process; but the practice of this operation once or twice on the dead subject renders it perfectly easy. Without doubt those who have attempted this with the sonde à dard, and who have rarely succeeded in avoiding a lesion of the peritoneum, will not dare the hazard of penetrating into the bladder without a conductor. I invite them again, however, to examine the position of this organ, and to convince themselves that the bladder may always be opened behind the symphysis pubis, without any other guide than the finger. In using the sonde à dard, surgeons often do that which they precisely wish to avoid, because, without great dexterity, the beak of the sound will pass beyond the fold which the peritoneum forms behind the superior boundary of the pubes.

"The bladder, when empty, is concealed behind the ossa pubis, where it exactly fills up the hollow which exists between them. In this state it has the shape of a flattened cone, of which the base is downward and the summit upward; its posterior wall touches the anterior, and behind it presents a concavity analogous to that of the pubes; the disposition is produced by the attachment of the peritoneum and the pressure of the small intestines.

"The summit of the bladder scarcely ever rises above the superior part of the ossa pubis, and consequently the anterior face is in intimate relation to the whole extent of the symphysis.

"Its conical, or rather its triangular form is produced by the urachus and ureters. To be assured that the bladder does not entirely contract upon itself, as in animals, it is sufficient to cut through the symphysis in the entire body; by a simple examination we may satisfy ourselves that this fortunate disposition of the bladder in man is singularly favourable to the operation above the pubes."

M. Amussat divides his process into six stages:—

1. He introduces warm water into the bladder, to give a consistence to this viscus. It is not necessary to distend it, as was done before the time of Frère Côme. We may content ourselves with injecting that quantity of fluid which the bladder usually contains; this is done even in cases where the patient is frequently tormented with a desire of making water. An assistant, by grasping the penis, may prevent the escape of the liquid.

2. He makes an incision in the direction of the linea alba, immediately above the pubes, to the length of three inches: then instead of cutting through the linea alba to the same extent as the incision through the skin and cellular tissue, he contents himself with making an opening just above the pubes, sufficiently large to admit a finger only.

3. The third stage consists in plunging the bistouri into the bladder, guided by the index of the left hand, and in substituting this finger for the bistouri. As soon as the bladder is penetrated, "the finger is bent like a hook for the purpose of suspending the fundus."

4. The fourth step is to explore the bladder with the finger, to aggrandize the opening of the linea alba, and that of the bladder, as far as is judged necessary; the stone is seized with a forceps and extracted, the left index finger being withdrawn at the same time.

5. The introduction of a thick, curved canula, by the inferior angle of the wound, for insuring the issue of the urine.

6. The union by the first intention of that portion of the incision which is above the canula; this is effected by strapping, graduated compresses, and a bandage.

Dr. Amussat has operated in this manner upon *thirteen* patients—*three* children, one two years old, the second four, and the third twelve years, an adult, and *nine* old men from 60 to 77 years of age. Of these cases *nine* have been successful, and sketches of the most interesting will appear in this Journal.

More recently the doctor has been engaged in speculations and experiments on the *torsion* of blood-vessels, as a typtic agent. Some accounts of these have appeared in former numbers of this Journal, but, it would seem, have not been well understood. The failure which is recorded in one number of THE LANCET, arose from the inner tunics of the vessel not having been broken through in the first grasp of the forceps. The process is very simple, and is shortly this:—The vessel being laid bare (say for example the femoral artery of a dog), it is immediately seized with a pair of forceps, having the ends of the branches cylindrical, and a clasp to keep them close, and the two inner coats are ruptured by the force of the closure; another forceps of the same kind is now placed on the cardiac side of the other, and the vessel extended by the distal forceps, while the proximal are held firm. The external coat alone is drawn through, and the inner ones are reflected into the area of the vessel, like the inverted finger of a glove. The twisting is now performed to ten or twenty turns, when the vessel is perfectly secure. When disengaged from the forceps, the vessel retracts a little, and if an artery, its extremity is seen to pulsate distinctly. M. Amussat has applied the torsion in many instances, but never unsuccessfully. In three cases of injuries to large arteries, the torsion was resorted to, and attended with the happiest results. The failures of Dr. Velpeau are mainly ascribable to his inexperience in the manipulation of the torsion, and it is to be hoped he will again be induced to give the operation a fair trial. M. Magendie has witnessed several of M. Amussat's experiments, and has formed a favourable opinion of their application to surgery. M. Amussat is now rather more than forty years old, possesses agreeable manners, and speaks English tolerably. Although the energy of his mind is not of the first order, nor the compass of his knowledge very extensive, his activity and perseverance deserve our respect; and it is to be observed that many of his censors would contribute more to their own improvement, and the good of society, by imitating his good qualities than by criticising his egotism.

THE LANCET.

London, Saturday, January 30, 1830.

If the future practitioners of medicine in Great Britain do not excel their predecessors in learning and skill, it certainly cannot be for want of laws and regulations to direct their studies. During the last year, the surgical corporations of London, Dublin, and Edinburgh, have recorded their zeal in promoting the qualifications of their licentiates by three several manifestoes on medical education. Edinburgh, if we recollect rightly, led the way in this race of codification; London followed the laudable example of its contemporary; and Dublin has just issued a comprehensive proclamation on the same important subject. The simultaneous movement among these respected bodies would furnish materials for speculation on the course which their duties and circumstances should have dictated; while the documents which they have published would supply ample data for an interesting comparison between the opinions and plans of instruction, promulgated by the three colleges upon the same topic. The discussion of each of these themes, to the length to which they might with advantage be carried, is quite inconsistent with our present purpose; but we cannot avoid stating the mere heads of such an examination, in order to put the reader in possession of a clew by which he may probably arrive, without our assistance, at the same conclusion to which we would lead him.

It has always been inculcated in this Journal, that the absence of unity in our system of medical polity, is one of the principal sources of the absurdity, injustice, and distraction, which characterise the legislative acts of those separate and independent bodies which are entrusted with the regulation of medical studies in these countries. We have repeatedly demonstrated, by fact and argument, that the existence of so many bodies, each acting and exercising powers, not only independent, but even subversive, of the interests and enactments of the rest, was totally incompatible with the freedom and improvement of the profession over which they presided. It requires neither extraordinary sagacity, knowledge of human nature, nor extensive political information, to perceive the justice of such a conclusion. Possessed each of a separate jurisdiction, and naturally stimulated by the desire of aggrandizement, these bodies must continue, as long as these causes operate, to present the spectacle of the same number of individuals exercising in society the rights of natural and civil liberty, which, as every person at all acquainted with the philosophy of social arrangements knows, are perfectly inconsistent with each other. They exhibit, in their struggles for ascendancy and their financial jealousies, the picture once presented by the state of Greece, split into a number of small, contentious republics, without even the slender tie of an Amphyctionic Council to unite their energies, control their vices, and concentrate their virtues for the attainment of one great object of national happiness and utility. The gift of power which exempts one from responsibility, makes each a depredator on its own subjects, and converts the whole into mutual enemies and rivals. The burthen of a single despotism may be borne, and even be made subservient to great ends; but the co-existence of many tyrannies in the same state, destroys even the sullen tranquillity of compulsory obedience,—renders the effectuation of useful purposes impossible, and makes Goldsmith's choice between the evils of one and many sovereign masters, both facile and rational. We need not look back to the history of our medical corporations to illustrate our positions; their present publications respecting their future members, neither of which is in the slightest degree accordant with the

other, render the retrospect perfectly unnecessary. On looking over these singular documents, it is indeed almost inconceivable how it happened that they should be so much at variance with each other on a common subject, on one which, if constant and general discussion could make it so, ought to be well understood, except for the reasons which we have just advanced. Here, for example, are three bodies, professing to teach, to practise, and regulate the same art and science; acquainted, in short, with the subject, practically as well as theoretically, and all engaged in deliberating on the best mode of attaining a certain end; and yet not one of them agrees with its contemporary on the course which should be adopted for that purpose. It may, perhaps, be replied to this remark, to which we call the particular attention of the reader for reasons to be explained immediately, that the same end may be accomplished by very different and apparently contradictory measures. We are not ignorant that this may be the case both in the speculative and demonstrative sciences—in morals as well as in mathematics. Any form of government may, doubtless, if well administered, render a nation happy: there are many ways of demonstrating a problem in Euclid, as well as of obtaining the same results in chemical processes. In these instances, however, the result is always the same. In the case before us, it is very different. "The best means of qualifying a surgeon for the discharge of his duties," is the problem under the consideration of these bodies; and granting that the course pointed out for this purpose by one is efficient, the concession must be fatal to the process of the other two; for while one of them supposes mechanical philosophy necessary to the formation of an accomplished surgeon, the two remaining entertain a contrary opinion, and they again differ from each other; the one maintaining that two courses of lectures on chemistry are indispensable, while the second as obstinately avers that one course is quite sufficient; so that they thus not only differ as to measures, but as to the essential qualities of the product sought. There is, in fact, no analogy in the two cases; the fallacy of the objection plainly consisting in taking it for granted that these bodies are agreed as to the necessary qualifications of a surgeon, in the same manner as chemists or mathematicians are agreed about the true solutions of their problems.

Allowing, however, for the latitude of opinion which may be always expected on speculative points of this description, there is a circumstance attending this difference of views in the present case which requires particular specification, and which cannot be explained on any other ground than the radical evils which we have just pointed out in our system. It might be expected that though these bodies differed among themselves, some measures would be taken by them to reconcile their discrepancies; or, at least, if they could come to the same conclusion on the best means of promoting the qualifications of their licentiates, to save them from the expense and trouble to which their inconsistencies always lead. In this country, for example, nothing is more common than the students and practitioners of one part of the empire passing over, either to graduate, or to practise, in another; but to whatever part of the state the emigrant flies, there he is sure to be thwarted by some laws and regulations to which at home he could not conveniently conform.

Now, what have these bodies done to remedy this evil? Have they consulted with each other on the adoption of an uniform plan of education, and on a similarity of rights, which would render the student and practitioner free from the existing disabilities under which he labours, wherever he may happen to settle? No: the only feature in which they agree, is the discordancy of their sentiments, and their common strife to mulct and embarrass their members both

at home and abroad. Whatever communication has passed between them was strictly confined to diplomatic arrangement about lectures and hospitals; each being exclusively intent on profiting as much as possible by the confusion in which they have involved all the branches of the profession, both old and young, over whom they preside. Letters from this professor, and that hospital surgeon, passed between these bodies; but about an uniform code of laws, by which all might be regulated, not a syllable appears to have been written. Other, and, indeed, far different, motives originated and influenced their deliberations; and it would be rather an amusing task to trace these motives themselves to their proper source, as showing very distinctly the serpentine course of policy which men will adopt when driven to a change of measures, yet reluctant to lose any of their profits by the revolution. The College of Edinburgh, for example, feeling itself placed, by the common consent of the profession, at the bottom of the corporate scale of respectability, and taunted so often on the prostitution of its chartered powers, bethought of recovering its sullied character; but, unwilling to lose the advantage of a quick and abundant sale of its licenses, it has drawn up a code of regulations whose specious appearance might deceive the public into a belief that they would be really put in force at the examinations of its licentiates; but of this, students need not have the slightest apprehension, for the quality of the article sold, remains precisely the same, though the *sign-board* has been altered. The College of Dublin, in like manner, driven by the impolicy of its previous ordinances and public opinion to the foot of the throne for a new charter, has taken precisely the same course as its northern contemporary; and in a curriculum exceeding all that ever preceded it in that line of legislation, has taken care, in the new laws, to secure even more than the average profits of the old, as we shall hereafter demonstrate. The College of London, too, when first brought before the bar of public opinion by the press, had recourse to similar artifices, and attempted to defend its monopolies by a multiplication of its exactions. Beaten from that untenable position by the same power which first put it into reluctant motion, its recent movement evinces a something of the progress of reformation, and the influence of popular opinion on the institutes of a country. The Colleges of Edinburgh and Dublin, sooner or later, will have to imitate its reluctant concessions, and follow its tardy steps towards concession, in the next edition of their absurd regulations. One step, at least, is thus gained in having put these bodies in motion; it plainly shows, that although they have an innate abhorrence of moving in the straightforward paths of truth and utility, that they are not wholly inflexible; and that, once loosened from their fastnesses in error and selfishness, they may, by a continued application of popular power assailing them on all sides, at length be placed in a position more favourable to their own characters, and more useful to that public, whose security and welfare should be their chief end.

The Council of the London College, however, as far at least as our observations have extended, has been far more illiberal and unjust, than that of either of its contemporaries. Its regulations have been oppressive in the highest degree, and all of them subversive of the principles, for the promotion of which the College itself was established. Instead of encouraging the cultivation of the science of surgery, the labours of the Council were, for years, conducive to nothing but the encouragement of an infamous monopoly. Self-elected, and irresponsible to the great body of the profession, it insulted and tyrannised over, while it laughed at the impotency of, its prostrate members. Rendered confident by fancied security, the Council, every year, made

fresh incursions upon the rights and privileges of the profession and the public, treated with indifference the admonitions of the wise, affected to despise the threats of the strong, and, at last, even trampled upon the victims whom its injustice had crushed. When trodden on, even the worm will turn upon its tormentor; and so at last the profession. Roused to a sense of its duty by the voice of justice and of indignation, through the medium of a free medical press, the College now affects to be liberal, because it no longer dares to repeat its acts of oppression. Had it persisted in its course of iniquity until driven from it by the legislature, the merit of consistency, at least, would have been awarded to it, and this would have afforded some pretext for the claim of honesty. But as a detected felon, with the halter before his eyes, affects penitence, and acknowledges his guilt, so the London College of Surgeons, seeing that its exposure is complete, and that neither the profession nor the public are to be gulled by professions of "duty," and the promotion of "sound chirurgical," presents to the world a confession of its past infamy and baseness under the title of "new regulations," and then unblushingly points to its unsullied virtue, and lays claim to new confidence and respect. In the attempts to rid the profession of the innumerable abuses of which this institution has been the prolific parent, various have been the projects adopted. The great body of the profession prudently directed its attention to Parliament, seeing, as it did, that the College acted under the sanction of an impolitic law; hence it was agreed at the largest meeting of surgeons that ever was held, that the Legislature should be petitioned for the abrogation of the charter. The prayer of that petition has been neither denied nor granted, and inquiry into the constitution of the College can be the only legitimate step to either the one or the other. Many applications may be unsuccessful, but discussion, free, open, unfettered discussion, in this and every other similar case, is the sure instrument of ultimate victory.

A portion of the profession appeared to entertain little or no confidence in an application to Parliament; and amongst this class, we presume, may be ranked the small knot of gentlemen who profess to have established THE BRITISH COLLEGE OF SURGEONS in Leicester Place, Leicester Square. A rival institution, it was thought, would lessen the pestiferous influence of, if it did not entirely obliterate, the old sink of corruption in Lincoln's Inn Fields; but the circumstances to which the new institution owes its origin, induce us to question the sincerity of the promoters of the scheme. The old College is indebted for its birth to fraud, falsehood, and deception, and her matricidal daughter has not been a whit more fortunate. Features of peculiar disbonour marked the hour of her conception, and her birth was imprudently and disgracefully concealed from those, by whom, alone, it could ever have been hoped, that either her legitimacy would be attested, or her utility established. The destruction of the old College by the new institution, would prove about as beneficial as the termination of a famine by means of a pestilence. The individuals who promoted this foolish undertaking could have known little of the information or the feeling which pervades the great mass of the surgical profession. Corruption has been too horrible in its consequences, to be viewed complacently in any shape. The indignation which was aroused by the unjust, the dark and villanous proceedings of a SELF-PERPETUATING, irresponsible body, has given birth throughout the profession, to a highly honourable and liberal feeling in favour of a just reform; yet, in despite of an influence so powerful and benign, the promoters of the British College had the hardihood and the folly to "establish" their institution by one of the most disgraceful hole-and-corner measures that we

ever remember. The prospectus of this College was published in No. 312 of this Journal, page 662, and, at its conclusion, there was the following notice:—

"It is proposed that two meetings be held—

The first, to consist of those *only* who concur in the necessity of establishing this College. At this meeting the prospectus, dated July 24th, will be submitted for rejection, alteration, or amendment, in all or any of its clauses: so that thus altered and sanctioned it may issue from, and be published by, the authority of this meeting.

The second meeting to be held pursuant to public advertisement, and open to all, for the purpose of ascertaining the opinion of the profession *at large* on the necessity of this undertaking.

By order, C. IRVING, Hon. Sec.
College Chambers, 2, Leicester Place,
August 10th, 1829.

N.B.—As the first meeting is to be convened *only* by notice from the secretary, those who wish to co-operate are requested to send their addresses immediately to the secretary."

Thus, *two meetings* were to take place. At the first, those only were to be admitted who were favourable to the undertaking. At the second, the opinion of the profession at large was to be taken on *the* NECESSITY *of the measure*. The first, or *private* meeting, took place on the 5th of October, and a report of the proceedings appeared in THE LANCET, No. 319, page 94. Here matters rested until November, when, to our astonishment, we received a small pamphlet, entitled, "By-laws, Ordinances, and Regulations, of the British College of Surgeons in London," and in this production the profession was coolly informed that the College was established. This, taken altogether, was a very ingenious contrivance. No person was to attend the first meeting who was not *favourable* to the design, *because* there was to be a "public general meeting, at which the sense of the profession at large was to be ascertained on the propriety of the undertaking." Some hundred individuals who attended, having been thus entrapped and gagged into acquiescence, the opportunity was deemed too good to be lost; and, accordingly, instead of preparing a prospectus to submit to a general meeting, it was most audaciously and fraudulently proposed and resolved, that the College should be forthwith established, and this, too, at a time when it will be seen, that had any man spoken *against* the undertaking, he would immediately have been told that he was "out of order." And now a pamphlet is put into our hands, which professes to contain the by-laws, ordinances, and regulations, of the College, without one word of a general public meeting, at which "the sense of the profession is to be learned of the propriety of the undertaking"!

An institution, originating in such an unprecedented breach of faith, and in a meeting of such an ultra hole-and-corner character, cannot receive the sanction or the support of the honourable members of a liberal profession; on the contrary, they can look upon it with no other feelings than those of indignation and disgust; and this single exposure of the unstable and corrupt character of its foundation, will, we trust, prove a sufficient caution to those, who, thus far, may have been misled by the tinsel of a glittering exterior, or the delusive colours of an affected liberality. Strengthened and renovated as the profession now is by the late decision of Lord TENTERDEN, a temple of medical science will soon be erected, to which all its votaries may repair with confidence, security, and honour.

We cannot close this notice without expressing our belief, that Mr. Wilkins, the chairman, is one of the entrapped. He is a zealous, consistent, surgical reformer, and a highly honourable man.

The following are the by-laws, ordinances, and regulations, of the pretended new College. We give them insertion because they constitute a feature, or at least a pimple, in the present aspect of the surgical profession; but we trust that such measures will be at once adopted, as will

relieve us from the necessity of returning to the subject.

"By-Laws, Ordinances, and Regulations, of the British College of Surgeons in London. Established the fifth day of October, 1829.

At a highly respectable meeting of medical gentlemen, held in pursuance of public advertisement, on the fifth day of October, 1829, in the theatre of the college, GEORGE WILKINS, Esq. in the chair, the following resolutions were put from the chair, and carried unanimously:

1st. *Resolved*,—That this meeting, having duly considered the present state of the surgical profession in this country, do conceive, that in order to promote the best interests of mankind, the honour and dignity of the surgical profession, and the advancement of science, it is indispensably necessary to organize and establish a New College of Surgeons; and that this college be forthwith established.

2nd. *Resolved*,—That this Institution be called "The British College of Surgeons in London."

3rd. *Resolved*,—That each member of this college have a vote (non-resident members by proxy) in the appointment of its council, in the formation of its laws, and in the appropriation of its funds.

4th. *Resolved*,—That there be three classes of members. The first class to consist of those who have enrolled their names previously to the first day of January 1830, as co-operating in establishing this college. These shall pay no entrance fee, but whatever they think proper to give be a voluntary donation. They shall receive a document signed by the council, testifying their admission as members *in consequence of their having thus enrolled their names*; but such document shall not refer to any professional knowledge, ability, or capability, to practise as surgeons: and they shall subscribe one guinea a year to the college fund. The second class of members shall consist of all those who have been duly and publicly examined by the council. They shall receive a regular diploma, which shall specify the nature of their examination, and the opinion of the council as to ability, knowledge, and competency to practise the surgical profession: they shall pay such fees as may be determined on hereafter. The third class shall be termed honorary members; must first be proposed by the council, and afterwards elected at a general meeting: they shall have all the advantages and the privileges of the second class of members.

5th. *Resolved*,—That the council, treasurer, auditors, and secretary, be chosen annually, at a general meeting, to be held on the first Monday in January, of which ten days' notice must be given by the secretary, in three at least of the London papers, and a specific notice sent to each resident member.

6th. *Resolved*,—That the council shall consist of not less than twelve members, five of whom shall form a quorum. That they possess the power of making such regulations, and doing such acts, as may from time to time be found necessary; provided, in the first place, the same be not inconsistent with, or in violation of, the spirit of those laws agreed to at this first meeting; and secondly, that their acts and regulations be subject to rejection, alteration, or amendment, at the next ensuing general meeting.

7th. *Resolved*,—That the council during the first year, shall act also as the court of examiners.

8th. *Resolved*,—That knowledge, without reference as to where acquired, be the only essential qualification to be possessed by candidates for the diploma.

9th. *Resolved*,—That this College never be connected, directly or indirectly, with any hospital, public or private school.

10th. *Resolved*,—That all examinations be open to the members, and to the public, by orders from members.

11th. *Resolved*,—That a vacancy in the council be filled up at the next general meeting.

12th. *Resolved*,—That any member may be expelled this college at a general meeting of the members, for any conduct deemed incompatible with the character of a gentleman, or of a professional man. Such meeting being called specifically for inquiring into the nature of the charge preferred against the member.

13th. *Resolved*,—That a general meeting, at ten days' notice, may be called at any time by the secretary, on a requisition signed by twenty members.

14th. *Resolved*,—In the election of officers, expulsion of members, and upon all questions involving individually any member of the college, two thirds of the whole number of votes given, shall be necessary for confirmation; but on all other occasions, the question shall be carried by a majority.

15th. *Resolved*,—That there be a fund, called "The British College of Surgeons Fund," into which all monies received shall be paid, and which shall be appropriated to the defraying of needful expenses.

16th. *Resolved*,—That there be a committee now formed, termed the provisional committee, which shall be empowered to act in every respect (with the exception of holding examinations) as the council, till the first Monday in next January, on which day

the first council of this college shall be elected.

17th. *Resolved*,—That besides the ordinary duties of this committee, they be requested to have prepared for the next meeting, a petition to his Majesty, and to both houses of Parliament, praying for an act of Parliament to incorporate this college.

18th. *Resolved*,—That these resolutions be published in six, at least, of the London Journals; and be also printed in the shape of a pamphlet, and a copy sent to each member of both houses of Parliament.

(Signed) GEORGE WILKINS,
Chairman.

BRITISH COLLEGE OF SURGEONS, 2, Leicester-place. The first meeting of the provisional committee was held on the 10th inst., when the above resolutions were revised, sanctioned, and ordered to be printed.

(Signed) GEORGE WILKINS,
Chairman.

October 10th, 1829.

Qualifications, &c. to be possessed by Candidates for the Diploma.

1st. Candidates must be graduates in arts, or have a certificate from some literary character, of their having received the education of a gentleman.

2nd. They must produce certificates of having been engaged five years in the medical profession, three of *which*, or two years *after* which, they must have attended some public hospital or infirmary: certificates of having attended three courses of lectures on anatomy, physiology, and pathology, with anatomical demonstrations and dissections; two courses on surgery, one on chemistry, materia medica, practice of physic; the obstetric art, botany, and medical jurisprudence.

3rd. The examinations shall take place on two days, one hour each day, and a week elapsing between.

(A) First day. On anatomy, physiology, pathology, and the materia medica.

(B) Second day. On surgery, practice of physic, chemistry, the obstetric art, and botany.

4th. Ten guineas shall be paid for the diploma."

DINNER TO MR. HANDEY.

THE suggestion appears to have experienced universal approval, and to this mark of respect it is thought by some, that there should be added a piece of plate. The *din-ner* is unquestionably desirable, because a report of the proceedings in the public newspapers would convey to practitioners residing in distant parts, and who may not read the medical journals, a knowledge of the new and advantageous position in which they are now placed. The publication of the substance of the legal report of the trial, in connexion with the discussion, would also produce an excellent effect upon the public mind. The profession, in their gratitude to Mr. Handey, must not forget that the law stands precisely where it did with regard to the practice of pure physicians and pure surgeons. Physicians could not recover at law for attendance, and they still cannot recover. Surgeons could recover for attendance in *surgical* cases, but they could not recover for attendance in *medical* cases; and they cannot, even now, unless they are also deemed in law, legally-qualified apothecaries. The question of recovery for "attendance" in medical cases has been tried before by several apothecaries, but the plaintiffs had not the good fortune to have their causes brought before Lord TENTERDEN. A correspondent, whose letter we insert, regrets that the verdict was not founded upon some statutory enactment; but Lord Tenterden's legal character is, and must ever remain, so justly celebrated, that his decisions will scarcely have less influence on future judges than the obligatory clauses of an Act of Parliament.

An advertisement will be found on the wrapper, requesting a meeting of such gentlemen as are favourable to the public dinner.

THE FIRE KING.

To the Editor of THE LANCET.

SIR,—I am ready to drink oil heated to 350 degrees, and to administer my antidotes to various poisons given to animals. You say that my feats respecting the oven, and oil, are unworthy the fire king. Now, Sir, if *you* or any of your friends will enter, and *remain* in the oven with me at 600, I will

then go in at 800 *degrees*, and if any one will drink oil at 350 degrees I will then drink it at 600 degrees.

You may bring two dogs, and yourself administer the prussic acid. Should one dog die, and the other (taking my antidote) live, I hope you will then allow that I am *not* an impostor. Both the dogs must be left with me three days after the experiment.

Your obedient Servant,
Thursday, Jan. 28. XAVIER CHABERT.

MONSIEUR CHABERT must recollect that the Editor does not profess to be a Fire King, or a Fire King's *subject*, and feels no inclination, therefore, to *remain* in an oven heated to 600°, or to drink oil at 350°. Nevertheless, he is deeply interested in the subject of poisons and their antidotes, and therefore begs of M. Chabert to name an early day on which he may attend with the two dogs, and a few gentle doses of prussic acid. M. Chabert has forgotten to state whether he will drink a tumbler or two of boiling water.

Elements of Physics, or Natural Philosophy, General and Medical, explained, independently of Technical Mathematics. Vol. II. Part I. By N. ARNOTT, M.D., of the Royal College of Physicians. London. Longman. 1830. 8vo. pp. 320.

SOMEWHAT more than two years since, it was our task to review the first volume of the Elements of Physics, of which we had occasion to speak in laudatory terms; the commendation we then bestowed upon it, has since been most amply justified by the reception it has met with from the public; four large editions have been called for in this country; it has been several times reprinted in North America; and translations have been made of it in France, both for general instruction, and for the more particular use of schools and colleges.

In our former remarks on this work, we entered so fully into its character, and showed so clearly the capabilities of the author for the task he had undertaken, that little need now be added concerning the present half volume, beyond a notice of the subjects on which it treats.

It contains two sections, one on the subject of heat, the other on that of light. Than the first, there is scarcely any subject in the whole range of science, so interesting to the medical man, whether considered with reference to the *origin* of diseases, or their *cure*. When we mention those of climate and of season, and such as arise from changes of temperature, we have comprehended the greater part of the ills which afflict humanity; and when we consider the subjects of clothing, and of lodging, of the regulation of atmospheric temperature in sick chambers, and of warm and cold bathing, we have included some of the most important particulars in medical treatment.

The analysis of the first section, at p. 6, exhibits the order in which the subject of heat is treated.

"Heat (by some called caloric*) may be strikingly referred to as that which causes the difference between winter and summer, between tropical gardens and polar wastes. Its inferior degrees are denoted by the term cold. It cannot be exhibited apart, nor proved to have weight or inertia, and the change of its quantity in bodies is most easily estimated by the concomitant change of their bulk; any substance so circumstanced as to allow this to be accurately measured, constituting a thermometer.

"Heat diffuses itself among neighbouring bodies until all have the same temperature, that is, until all similarly affect a thermometer. It spreads partly through their structure, or by conduction, as it is called, with a slow progress, different for each substance, and in fluids modified by the motion of their particles; and it spreads partly, also, by being shot or radiated like light from one body to another, through transparent media or space, with readiness affected by the ma-

* And so called, we may here take the opportunity of saying, with greater propriety. Heat is, in truth, the *effect of*, and not a synonymous term with, caloric. Heat is the sensation which free caloric produces; it has no existence when caloric is latent, and science is too exact to permit the employment of either of these terms to denote the same property of matter (so to term it) with impunity. The worthy physician probably consulted the popularity of the term in giving a title to his book, and was therefore induced to continue its use through the sections; but we venture to think that the word "sight" would have borne to be substituted for "light," with no less propriety than the term "heat" has been employed to signify "caloric."

terial and state of the giving and receiving surfaces.

"Heat, by entering bodies, expands them, and through a range which includes, as three successive stages, the forms of solid, liquid, and air, or gas, becoming thus in nature the grand antagonist and modifier of that attraction which holds corporeal particles together, and which, if acting alone, would reduce the whole material universe to one solid lifeless mass. Each particular substance, according to the nature, proximity, &c. of its ultimate particles, takes a certain quantity of heat (said to mark its capacity), to produce in it a given change of temperature or calorific tension; undergoing expansion, then in a degree proper to itself, and changing its form to liquid and air, at points of temperature proper to itself; the expansion in bodies generally increasing more rapidly than the temperature, because the cohesion of their particles lessens with increase of distance, being remarkably greater, therefore, in liquids than in solids, and in airs than in liquids; and the rate of expansion, moreover, being much quickened as the bodies approach their points of changing form to liquid or air, to produce which changes, a large quantity of heat enters them; but in the new arrangement of particles and increased volume of the mass, it becomes hidden from the thermometer, and is, therefore, called latent heat; for any given substance, the changes of form happen so constantly at the same temperature, that they mark fixed points in the general scale of temperature, and enable us to regulate and compare thermometers. Heat, by expanding different substances unequally, influences much their chemical combinations. Heat influences also the functions of animal and vegetable life.

"The great source of heat is the sun; but electricity, combustion, and other chemical actions, condensation, friction, and the actions of life, are also excitants."

To this extract we shall add the analysis of the section on light, p. 162.

"Light is an emanation from the sun and other luminous bodies, becoming less intense as it spreads, and which, by falling on other bodies, and being reflected from them to the eye, renders them visible. It moves with great velocity, and in straight lines where there is no obstacle, leaving shadows where it cannot fall. It passes readily through some bodies, which are, therefore, called transparent, but when it enters or leaves their surfaces obliquely, it suffers at them a degree of bending, or refraction, proportioned to the obliquity. And a beam of white light thus refracted, or bent under certain circumstances, is resolved into beams of all the elementary colours, which, however, on being again blended, become white light as before.

"Transparent bodies, as glass, may be made of such form as to cause all the rays which pass through them from any given point, to bend and meet again in another point beyond them; the body then, because usually in form somewhat resembling a flat bean, or lentil, being called a lens. And when the light thus proceeding from every point of an object placed before a lens, is collected in corresponding points behind it, a perfect image of the object is there produced, to be seen on a white screen placed to receive it, or in the air, by looking towards it in a certain direction. Now the most important optical instruments, and even the living eye, are merely arrangements of parts for producing and viewing such an image under variety of circumstances. When this image is received on a suitable white surface, or screen, in a dark room, the arrangement is called, according to minor circumstances, a camera obscura, a magic lantern, or solar microscope. And the eye itself is, in fact, but a small camera obscura, of which the pupil is the round opening or window before the lens, enabling the mind to judge of external objects by the size, brightness, colour, &c., of the very minute but most perfect images or pictures formed at the back of the eye on the smooth screen of nerve called the retina. The art of painting aims at producing, on a larger scale, such a picture, and which, when afterwards held before the eye, and reproducing itself in miniature upon the retina, may excite the same impression as the original objects. When the image beyond a lens, formed as above described, is viewed in the air, by looking at it in a particular direction, then there is exhibited the arrangement of parts constituting the telescope or common microscope.

"Light falling on very smooth or polished surfaces, is reflected so nearly in the order in which it falls, as to appear to the eye as if coming directly from the objects originally emitting it, and such surfaces are called mirrors. Mirrors may be plane, convex, or concave, and certain forms will produce images by reflection, just as lenses produce them by refraction; so that there are reflecting telescopes, microscopes, &c., as there are refracting instruments of the same kind. Light, again, falling on bodies of rougher or irregular surface, or which have other peculiarities, is so modified as to produce all those phenomena of colour and varied brightness seen among natural bodies, and giving them their distinctive characters and beauty."

We give the whole of the analyses, because, on the same excellent plan that was observed in the former volume, they are

made, paragraph by paragraph the texts on which Dr. Arnott founds his several sections; and, also, because they may be regarded as the creed which the author entertains on the subjects of light and heat. It cannot be said that they develop any principles that are not already well known to the scientific. It is, perhaps, one of the merits of an elementary work of this kind, that it does not attempt to lay down new laws or new readings of old ones. The elements of physics are so decidedly established, that natural philosophy must be esteemed the most advanced of all the sciences, and the least open to the speculations of original thinkers. A more lucid arrangement, or more varied illustration of its truths, is as much as can be required from writers in this department of literature. At the same time, students who are attached to a most important and delightful branch of science, must feel an interest in knowing the order in which a very learned man (and such is Dr. Arnott) unfolds his views and communicates his information.

It is not easy to make any further extracts, as an union, not to be readily broken, runs through the whole. The illustrations are very ample, and have, indeed, been exceeded in ingenuity and happiness of thought, by no writer with whose works we have met. We may, however, refer to the chapter on combustion as particularly instructive, both from the perspicuity with which the subject is explained, and from its important connexion with circumstances of daily and hourly occurrence. At page 153 is an account of a very ingenious furnace or firegrate, invented by the author, in which, by lighting the coals at the surface, and supplying the fuel from below, all smoke is prevented; the vapours from the unburnt, or half-burnt, fuel, has necessarily to pass through the glowing cinders, by which process they are consumed. The idea which it suggests is well worth attention in warming the room of an invalid. Before quitting this part of the volume, we must not omit to notice a singular statement which occurs in the very first page, viz. that "if a large room were completely closed, so that no air whatever could escape from it; even so small a body as an apple could not be pressed into it additionally, by less force than fifty or sixty pounds." It would be difficult to say what the author intended to express by this; we cannot for a moment suppose, he would really maintain that such a force is necessary to reduce a volume of air by no more than perhaps a hundred thousandth part of its bulk.

The subject of light, much more difficult than that of heat, both from the nature of its phenomena, and its more immediate connexion with mathematics, is, with some few exceptions, explained with equal clearness and simplicity, as that of heat; the exceptions are those connected with perspective, the refracting telescope, and the concave mirror, which are hardly so clear as the rest. The first of them, indeed, is scarcely so capable of familiar illustration; but the account of the last is too short, and, in some respects, deficient; thus no explanation is given, though the fact is stated, why it forms an inverted image of the reflected object; indeed, the figure would seem to show that this was not the case, and is thus at variance with the text. The explanation of the rainbow, on the contrary, is so good, that, as it is but brief, we cannot do better than conclude our review with an extract of it, though we have not the advantage of the accompanying diagrams to render it equally intelligible.

"Although the external surface of glass only reflects a small part of the light which falls upon it, being therefore a feeble mirror, very curiously, if light which has entered a piece of glass, fall upon a back or internal surface very obliquely, instead of passing out there, it is more perfectly reflected than it would be by the best metallic mirror. This fact of the back and internal surface of a transparent mass becoming a mirror, gives us the explanation of that beautiful phenomenon the rainbow, which may be explained as follows. While the sun shines upon the spherical drops of falling rain, and its light falling upon the whole central part of any drop, passes completely through, still that portion which enters near the edge of the drop, is refracted, and reaches the back surface of the drop so slantingly, or at an angle so great, that there occurs an entire reflection of it instead of transmission; the ray therefore is returned to the lower part of the drop, opposite to where it entered, and thence descends to the earth, or the eye of the spectator. Thus every drop of rain on which the sun shines is a little mirror suspended in the sky, and is returning at a certain angle all round it, viz. at an angle of 41°, a portion of the light which falls on it;

and an eye placed in the required direction, receives that reflected light. If in this case there were *reflection* only, and not also *refraction* with *separation of colours*, the rainbow would be only a very narrow resplendent arc of white light, built up of millions of little images of the sun; but in truth, because the light which enters near the edge of the drop traverses the surface very obliquely, it is much bent or refracted before its reflection, and is divided into rays of its seven colours, as it would be on passing through a prism; and this division or separation continuing after the light again escapes from the lower part of the drop, instead of one white ray descending from each drop to a certain point of the earth, seven rays descend, and of these an eye can only catch one at a time: but for the same reason that seven eyes placed in a line from above downwards (viewing the centre of the bow) would be required to see the seven colours from one drop, so one eye looking in the direction of seven drops situated in a corresponding line, will catch the lower or red ray of the upper, the orange or second ray of the next, the yellow or third ray of that which follows, and so on, while it will lose all the others, and thus will see the several drops as if they were each of one colour only. Of such elements, then, found in the same relative directions all around the eye, the glorious arch is formed. No two eyes can see the same rainbow, that is, can receive light from the same drops at the same time; and the same eye does not for two instants receive light from the same drops. This rainbow can never appear to a person on a plain, unless when the sun is within 41° of the horizon, for otherwise the centre of the rainbow would be more than 41° under the horizon, and 41° is the whole semidiameter of the bow."

LONDON MEDICAL SOCIETY.

ANEURISM—DR. BLICKE'S REJOINDER TO MR. GOSSET.

To the Editor of THE LANCET.

SIR,—Is it possible the refulgence of my "luminous" epistle should have dazzled Mr. Gosset's optics? Flattery goes a long way, and I am not less alive to it than my neighbours; but the design in his letter is too shallow, and I fear I shall hardly be forgiven by you, Sir, for the fleeting impression. Mr. Gosset's letter professes to be a reply to the misrepresentations contained in my letters of the 29th December and January 11th, and yet, Sir, the only points replied to are confirmed; it would appear, therefore, at first sight, to require no answer. As, however, the confirmation is so obscured by the halo of ridicule and extraneous matter mixed up, and as there is no "luminous" part of his letter from which any light can be borrowed, I fear, Sir, even you, "accustomed as you must be to witness the blunders of your correspondents," and grope your way, would hardly find it possible. The first point referred to in my letter of the 29th December, is the assertion, "That the preparation had neither been labelled nor put up in the museum by Dr. Hodgkin," which Mr. Gosset asserted it had. These are his words, Sir, page 441, "If Dr. Hodgkin believed it was not aneurism, it was very culpable of him to put it up in the museum of Guy's Hospital as a case of renal aneurism." What has the hypothesis to do with the fact? I have never said Dr. Hodgkin did not believe it aneurism; on the contrary (see page 544), "That he had supposed it so, but as he had not put up the preparation, he did not speak of his own knowledge." I am not defending Dr. Hodgkin from the hypothesis, but the misstatement of which he was accused by Mr. Gosset, and by the authority of which, Sir, be it remembered, Mr. Gosset wished to overwhelm me. The words believing and asserting, have far different significations: Sir Astley Cooper believed, because he was told so, but denied asserting it. Dr. Hodgkin's letter was sent to you, and, therefore, could not be in the hands of the registrar.

I have now to reply to an assertion made by Mr. Gosset, and the proofs he offers in support, viz. that I defined true aneurism as consisting of "an enlargement of the whole of the tunics of the artery." For the proof, I am referred to a contemporary journal, where I find, page 213, "He (Dr. Blicke) did not think it was aneurism, for by that term he meant dilatation of the coats of an artery." Mark the difference, Sir, the words "whole circle" are omitted; but, Sir, I have gone further, I have been to the reputed editor of the journal, and the gentleman who took the minutes of our debate that evening (the secretary being absent), and am assured, that was not the view taken of what I said. I have also shown, as I shall presently have to do again, that enlargement of the whole circle and tunics of an artery, is not aneurism, while true aneurism consists in a partial dilatation. I must now refer you to page 544, and you will find the same assertion, previously made by Mr. Gosset at the Medical Society, answered, as I have now a right to assume, in a way he cannot contradict; for though his letter is avowedly an answer to that explanation, no notice is taken of it, further than a repetition of the charge: next comes another half column of ridicule, far beneath

my notice; but even here, Sir, Mr. Gosset, as usual, makes an assertion, and gives evidence to prove his assertion is unfounded; he then proceeds to quote from Scarpa, proving what I have repeated so often. He (Mr. Gosset) asserts, viz. that aneurism, as it is met with, is always caused by a solution of continuity of the coats of an artery, etc, the sac being formed by the surrounding cellular substance. He then quotes Hodgson to prove, that the dilatation of the whole circle of an artery has been confounded with true aneurism (which being what I have accused him of, I suppose is to show he is not singular); and, lastly, quotes Tyrrel's edition of Sir Astley Cooper's lectures, to confirm Scarpa and himself in the opinion just repeated, and then asks if these quotations are not sufficient to prove his definition of true aneurism *more correct* than Dr. Blicke's, who asserted that it depends on a "dilatation of the whole of the tunics of the artery." My answer is simple: it is not, for both would be at variance with fact. I repeat, true aneurism consists in a partial dilatation of the circle, in conformity to Hodgson's opinion now quoted, as usual, to confute himself (page 377 of THE LANCET), and particularly stated by me in my letter, to which I shall have to refer presently. I am next called upon to exercise my ingenuity in reconciling the contradiction in my letters; in reply, I can only assure you most sincerely, that I think "nothing less than the ingenuity" of a Gosset can prove that the assertion of this contradiction is not the grossest, wilful deception. I have always made a distinction between true and spurious aneurism (see THE LANCET, page 440, where the terms are used before Mr. Gosset had spoken on the subject), and also between true aneurism and dilatation of the whole circle of the coats of an artery, which is not aneurism, as I have shown by reference to Hodgson; and I now contend for the last time, in spite of the opinions of Scarpa, Sir A. Cooper, Tyrrel, with even Mr. Gosset to support them, that this distinction of true and spurious aneurism, as far as it goes, is correct. The first quotation, then, asserts, Mr. Gosset confounded one species of aneurism, viz. true, with a disease which was not aneurism; and the ground upon which I accused him, was the following expression (addressed to the president in answer to the terms spurious and true, used by me), viz. "true aneurism is a rare disease, I am speaking of aneurism as we meet with it where the sac is formed of condensed cellular substance, and to which, this first quotation," I perfectly agree, etc. was my reply; from his own mouth thus I prove—I, at least, was speaking of more than one species of aneurism. Again, the very term true aneurism, showed I did not coincide with Scarpa, and proves he could not be ignorant of the distinction I was making, the passages have no connexion, and, consequently, under all these circumstances, the attempt at deception is wilful. But to recapitulate; the first passage simply states, Mr. Gosset makes true aneurism no aneurism; while the second makes him state the nature of aneurism (as it is ordinarily met with) to be always spurious, i. e. or without the partial dilatation of the muscular coat, &c., which I deny. Mr. Gosset next proceeds to comment on the style I have commenced my letter with, and asserts I wish two facts to be inferred; 1st. "That the question as to morbid appearances, has never been fairly discussed;" 2dly. "That I had not been allowed to examine the preparation myself." To the first, I plead partially guilty; and, in continuation, ask him if either he, or any of the celebrated staff of Guy's, have replied to, much less answered, my five reasons for not believing it aneurism given in page 440 of THE LANCET; and the second I deny in toto, and refer him to page 440, where I expressly state the contrary in retaliation. I must now call your attention to an evident inference he wishes to be drawn, viz. that every member of the London Medical Society believes it to be aneurism, when he stated no one expressed a doubt but Dr. Blicke; and I ask, did any one express the contrary, but the gentleman previously committed. I consider, and I am sure, Sir, you will join me, I had a perfect right to have the preparation taken out of the bottle; the promise of the president meant that or nothing; and if the Society had no right, why had the staff of Guy's? or why bring it again, if a more perfect examination was not necessary? The next point is, Sir, that in which a bold truth is announced (one suspected for some time, by many gentlemen similarly situated with myself, paying two guineas per annum, and occasionally attending the medical Society), viz. That the President, Mr. Gosset, and one or two more members, constitute what is called *the Medical Society of London*. You may, probably, hear from me again about this. You, Sir, have already given some prophetic opinions, and these seem gathering in thicker clouds daily. The line for Mr. Gosset is already chalked out, therefore I need not repeat it, I have no inducement; it having been refused me, the question then is only a taunt. I do not contend the aneurism had been manufactured by the re-dissection, but I do contend the character was rendered less obvious, see page 544. "That the artery was pulled down out of its place, &c." A little vanity I suppose is of no consequence, and therefore no wonder Mr. Gosset cannot see the nature of the "serious crime."

Having thus disposed of Mr. Gosset's no-

minal reply to my letters, I must request you to accept my thanks for your patience and courtesey, and as it is very improbable I shall ever join issue on this subject again, would conclude with remarking, "Exceptions prove the rule," lest Mr. Gosset should "stumble" over one or two of them given in Hodgson, and think them otherwise, as I now find, I have induced him, Mr. Gosset, to read Hodgson for example, although I have stated aneurism is always formed by rupture of the internal coat and dilatation of the outer, these exceptions take place, and the lamellated blood has been deposited even in simple dilatation of its circle. He is fond of giving advice, and, at parting, I would wish to be good natured, and recommend him in future never to play with edged tools, and even to be cautious with ridicule, for if time or inclination had led me, I could have traced an admirable portrait of Sir Fretful Plagiary in his voluminous letter.

I am, Sir,
Your most obedient Servant,
W. F. Blicke.

Walthamstow, Jan. 27th, 1830.

LETTER FROM DR. HODGKIN TO MR. CALLAWAY, ON MR. GOSSET'S CASE OF ANEURISM OF THE RENAL ARTERY.

Description of a preparation of the Kidney removed from a female patient of Mr. Gosset, who had died from copious hæmaturia.

(On inspection, it appeared that aneurism of the renal artery had led to the hæmorrhage, but doubts were afterwards attempted to be thrown on the correctness of this opinion.)

TO T. CALLAWAY, ESQ.

My dear friend,

Understanding that the interesting preparation of kidney affected with aneurism of its artery, had acquired an additional interest in consequence of doubts having been raised respecting the nature of the pathological appearance which it presents, I have been induced to make a very careful examination of the preparation. Our friends C. A. Key, B. B. Cooper, Dr. Addison, and Mr. Gosset, were present, and, as well as the preparation itself, can confirm my statement. Before I proceed, it may not be amiss for me to explain that I had not only not been present at the inspection, but had not examined the preparation in a recent state. I saw it superficially, but considered it as a specimen of aneurism of the renal artery, not merely on the very sufficient ground of thy authority, but also from seeing a congulum which, though it had been detached, appeared to have been cut from the interior of the pelvis, and had quite the character of an aneurismal clot; indeed it was not easy to conceive what else it could be: I must have given an erroneous impression to Dr. Blicke, if he conceived that I doubted its being aneurism. Until the moment I saw him I entertained no such doubts, and on his expressing his, I explained to him what I have above stated as my reasons for believing it to be an aneurism, but observed that as the preparation had been put up by my Assistant, with only a cursory examination by myself, I could not state my opinion as to the fact. The detached clot above mentioned, I observed had been lost; the portion of the sac in which it was contained, was attached to the part from which it had been separated.

Having more completely cleared away the fat and cellular membrane from the sinus of the kidney, I find that the renal artery, which is tolerably healthy to a short distance from its division, preparatory to its penetration into the substance of the gland, there becomes thicker and somewhat dilated, The principal dilatation however is in one of the branches, from its very commencement in the renal. It is dilated to the size of a tolerably large nut, independently of that portion which, from its projection into the cavity of the pelvis, had been cut off in laying open the kidney in the ordinary way. The membrane of the pelvis adhered not with uniform firmness to the sac. Both having given way, in all probability led to the fatal hæmorrhage. The greater part of the sac is still filled with coagulum, and lies in the sinus of the kidney. It appears that this sac is more completely formed from the coats of the vessel than is often the case with aneurismal tumours. In examining the preparation as I have now myself put it up, thou wilt observe the trunk of the vessel laid open, and a bristle inserted which passes between the coats of the dilated vessel and the clot into the pelvis. On the interior thou wilt see the pelvis laid open, and, on each side of the slit, dissected from the sac. The kidney appears to be in every other respect healthy.

Thine, &c.

(Signed.) Thomas Hodgkin.

GENERAL PRACTITIONERS.

To the Editor of The Lancet.

Sir,—It is of the first importance that the laws affecting the profession should be distinctly stated, correctly explained, and perfectly understood. Your labours have contributed more to forward the attainment of

these ends, than any others; perhaps there might be more truth in saying, they have *exclusively* accomplished them.

Your devotion to the cause of Reform, and zeal in defence of the rights and respectability of general practitioners, appear to have received a fresh stimulus from recent events; and if the class alluded to second your endeavours, they must speedily be emancipated from a thraldom as humiliating to their character, as it is injurious to their interests. I hope there are but few so abject, with souls so dead to independence, as to be insensible to the spirit-stirring appeals of your late numbers.

The decision which enables general practitioners to charge for attendance, is, doubtless, an era in medical policy. It is, however, much to be regretted, that it is not founded on a statutary enactment; it should be remembered, that it is only a decision at common law. For, should Lord Tenterden be succeeded by a chief less liberal and enlightened than that excellent judge, it is not for any one to say that his precedents will be invariably adhered to. Should the present chief of the Common Pleas, or a future one, be less well disposed than his late arthritic and turbulent Lordship, we are not sure that even his decision will be respected. While alluding to that testy judicial gentleman, it may be well to observe, that in your exposition of his charge, you *err* in affirming, that it is the reverse of what your correspondent alleged it to be. He only stated that it was the *first decision warranting apothecaries to charge for attendance*; and, upon referring to the report, he will be borne out in the assertion. No mention is made that the jury did *not* disregard Best's admonition, and give a verdict for the full amount sued for;* indeed if they did not, Lord Tenterden's decision suffers considerable abatement in value, inasmuch as the expressed intention of this decision is, to enable the practitioner to remunerate himself by charging for visits, instead of deriving that remuneration from a superfluous amount of medicine. Again, Lord Tenterden's permission to charge for attendance, was grounded upon the supposition that less medicine had been supplied; there appears to be an implied contract, that the visits shall not be charged for, in *addition* to the medicine, but to the *exclusion* of *some* of it.

There will be wisdom in all cases to furnish as much medicine as must ensure a verdict for 40*s*., as the novel charge might not find equal favour with future juries; and judges may arise, who might disregard the decisions of the good Lord Tenterden and his antithesis, Chief Justice Best.

You correctly describe it as a "boon;" how much better if we could demand it of juries, and laugh at the opposition of any one syllogism that Sir James, who,

"With glorious lawyer-like delight
In puzzling all that's clear and right,"

might array on an "average maximum" against us!

It is much to be desired, that the non-medical public be acquainted with it by means as widely circulated as your own; for although some will regard it as a millenium, there are others who will view this new privilege of the profession with suspicion; *these* it may be difficult to convince, that it will save them either money or medicine; and it will be long ere the system (to adopt parliamentary slang) "works well."

I am, Sir,
Your most obedient servant,
A. T.

London, Jan. 25th, 1830.

* Can our Correspondent name the amount for which the plaintiff sought to recover.—Ed. L.

ELECTRO-PUNCTURE.

Having given, in a former Number of The Lancet, some cases illustrative of the effects of electricity, combined with acupuncture, in neuralgia, we trust the following two cases of dropsy, treated by electro-puncture, will be read with interest:—

Case I.—R., ætat. 56, having, for several years, been subject to lumbago, in consequence of which his body was bent anteriorly, began, in the summer of 1828, to be affected with dyspepsia, loss of appetite, costiveness, etc.; and, in September of the same year, after exposure to wet and cold, with hæmoptysis, and œdematous swelling of the legs. The spitting of blood ceased under the use of mucilaginous potions, with nitre; the dropsical affection, however, increased, and extended to the abdominal cavity. The secretion of urine was very scanty, the pulse frequent, and the patient complained of slight cough; pain in the chest, thirst, and dryness in the throat. His bowels were costive. The use of digitalis, calomel, the acetate of potash, squill, and other diuretics, as well as that of purgatives, had no good effect; and towards the end of October, the lower extremities, genitals, and abdomen, were enormously swelled, and the face and hands began also to become anasarcous. The patient having objected to the operation of paracentesis, Dr. Koenig proposed the use of electro-puncture in the following manner:—two needles were plunged

into the skin of the abdomen, about an inch on either side of the linea alba, and to the depth of about two lines; they were moistened with salt water, and brought in contact with the poles of a galvanic battery, of about sixty pairs of plates; at the moment of contact, the patient felt a very violent pain, and the abdominal muscles strongly contracted. The pain was of momentary duration, but left a slight burning sensation. The needles were touched three times a-day, from twenty to thirty times, and their number was subsequently augmented. From the first application of galvanism, the secretion of urine began to increase, the skin became softer and moister, and digestion was improved. No internal remedy was used, except a weak infusion of juniper berries. Four weeks after the first application of galvanism, there was hardly any œdema of the lower extremities, except at the ancles; the ascites had also greatly diminished. The patient still continued the use of electro-puncture three times a-day for a few weeks; after this period he was perfectly well, and two months after none of the dropsical affections had recurred.

Case II.—M. M., æt. 39, having, for more than six months been subject to dyspnœa, was, in Nov. 1828, affected with violent pain in the joints of the lower, and subsequently of the upper, extremities; this pain gradually diminished, leaving, however, a slight tumefaction of the wrists. On the 23d of November, Dr. Koenig found the patient with the symptoms of hepatitis and ascites; the face and eyes of an icteric hue; the urine high coloured; the fæces whitish; the abdomen was much swelled, with distinct fluctuation; the right side very painful and tender; the pulse full; tongue yellow; etc. Under the use of leeches, the warm-bath, and purgatives, the inflammatory affection subsided, and had, on the 25th, entirely disappeared; the swelling of the abdomen was, however, not in the least altered, but rather seemed to be increasing: Dr. Koenig accordingly employed galvanism in the same manner as in the above case, and with a similar effect; the secretion of urine was augmented by it; the bowels became regular, the appetite increased, and within about three weeks the patient was perfectly cured. —*Hufeland's Journal.*

SPASMODIC DYSPHAGIA,

Successfully treated by the application of Sulphate of Morphine, according to the Endermic method.

Cristina Mozzani, ætat. 23, of a nervous temperament, was admitted into the Ospedale degli Incurabili, at Abbiategrasso, on account of hemiplegia of the right side, with which she had been affected for eight years; in other respects she appeared to be well, menstruation was regular, etc. Towards the beginning of June, 1829, she complained of loss of appetite, and a sensation of fullness in the pit of the stomach, and on the 6th she was suddenly seized with an epileptic fit, which lasted six hours, and which, from this time, returned whenever she attempted to swallow any thing, solid or fluid, though the subsequent attacks were not of so long duration as the first. The application of leeches to the epigastrium and along the neck, the use of clysters, with asafœtida, and a blister to the chest, as well as the internal use of musk, had no good effect. During the fit, the patient had hiccup, and at every attempt at deglutition, felt a violent spasmodic pain at the middle of the pharynx. The examination of the throat exhibited no morbid appearance. In this state she continued for about a fortnight, without swallowing any thing whatever. A blister was applied over the anterior part of the neck, but without the least effect, and the dysphagia continued as before. Dr. Carboni now ordered the application of half a grain of the sulphate of morphine over the blistered surface, which was then simply dressed with cerate; a few hours after the application, the dysphagia was considerably less; the patient still felt the constringent pain in the œsophagus, but was able to swallow. On the following morning, the sulphate of morphine was applied a second time; from this period deglutition was perfectly free, and produced neither pain nor convulsions. The wound from the blister was still kept open for a few days; but as the patient continued well, no further application of the sulphate of morphine was found necessary.—*Ann. Univ. di Med.*

SINGULAR CASE OF MEDULLARY SARCOMA OF THE EYE.

C. M., a boy twelve years and a half old, of scrofulous habit, was, in the beginning of January, admitted at the Asylum for the Blind, in Dresden, under the care of Dr. Ammon. The right eye had been completely destroyed in consequence of a fall, the left was in the following state:—The upper eye-lid was very prominent, and, as well as the temporal region, covered with large livid veins; it was extremely tender to the touch, and when it was raised, there was a great discharge of tears; on the conjunctiva of the globe was a dense net-work of varicose veins; the palpebral conjunctiva was injected, the cornea protruded and very tense, and the iris was of a dirty greenish blue, and so firmly pressed towards it, that the anterior chamber was almost entirely obliterated; the sclerotica was also filled with varicose veins, and at its junction with the cornea, formed a very prominent livid ring; the pupil was much dilated, of an oval form,

and the space behind it was filled by a smooth body of straw colour. The globe did not appear to be enlarged, but was evidently protruded; the least touch caused the most violent pain in it, and over the left side of the head; vision was completely destroyed. Of the origin of the disorganisation, nothing could be ascertained. As there was apparently no doubt with regard to the nature of the evil, and no probability of its being cured by any remedy, Dr. Ammon decided upon the extirpation of the globe, which being, however, objected to by the parents, the disease was left to itself. For about a month, it appeared to remain stationary. After this period, however, the varicosity seemed to increase; and one morning, when the patient complained of more pain than usual, an extravasation of bright red blood was found to have taken place between the cornea and the yellow body; the whole eye, at the same time, was the seat of violent congestion, and there was a considerable degree of constitutional excitement. Under the use of compresses, with the solution of the extract of belladonna, the extravasated blood began to lose its bright colour, and, after some days, appeared to have been almost entirely absorbed, so that the eye seemed to be in the same state as before, except that the yellowish fungus had assumed a somewhat darker colour. After about six days, however, there was again a large quantity of blood extravasated under the cornea, with the same symptoms as before; the cornea was of a dark colour, and forcibly protruded, so as to threaten immediate rupture. Under the use of the solution of the extract of belladonna, the vascular turgidity of the eye again subsided, and the extravasation gradually disappeared, leaving, however, an opacity of the cornea, and a very deep-seated obtuse pain in the interior of the globe. The eye continued in this state for some months, with periodical attacks of increased vascular irritation, but without the recurrence of the effusion. From this period, however, the disease appeared to proceed more rapidly to its termination, the globe becoming larger, and the cornea assuming a yellowish green colour. While in this condition, the patient was shown to several professional friends of Dr. Ammon, in whose diagnosis of the disease they all concurred. In August, 1828, the globe had so far protruded, as not to be covered by the eye-lids. The pain was most violent, and the cornea excessively tense. Unfortunately, Dr. Ammon was at this period obliged to leave Dresden for a few weeks: on his return towards the end of September, he found the patient, to his surprise, in the following state:—the swelling of the left side of the face, and the tumour of the eye itself, had greatly subsided; the globe was considerably smaller, and free from pain even on pressure; the anterior chamber had entirely disappeared; the cornea being flattened, the conjunctiva of the sclerotic was of a dirty yellow colour, but without any varicose vessels; the iris was firmly adherent to the cornea; the pupil of an angular form, and filled by a yellowish mass, with a blackish spot in the centre.—*Hecker's Annalen, Sept.* 1829.

GUY'S HOSPITAL.

BITE OF A LEOPARD.

A young fellow, about twenty-three years of age, was admitted into the hospital, Jan. 1, 1830, in consequence of having received an injury at the back part of his neck from a leopard, at the Tower; he gave the following account of the accident: he is by *profession* what is generally called a "bone-grubber;" and being on the "look-out" for bones, &c., in the Tower, he saw a door open; in full expectation of a rich supply of the above-mentioned article, and seeing no one to oppose his entrance, he boldly passed through, and commenced the search; but his brilliant expectations were quickly turned into dismay, on beholding the two fierce eyes of a leopard fastened upon him, and the animal in the act of making a spring; he turned to retreat, his own bones being all he now cared for, but the beast sprung upon his back and neck; he roared out lustily for relief, and fell; a soldier on duty took the alarm, and decamped as fast as possible from his station; the keepers of the animal, however, quickly appeared, and by applying some heavy blows with the end of a musket to the leopard's head, rendered him senseless, and removed the man from his grasp; he was brought to the hospital, and upon examination the integuments at the back part of the neck were found considerably lacerated, and the teeth appear to have penetrated rather deeply; a portion of integument, which was nearly torn off, was brought into its natural situation, and retained there by means of sutures; twenty leeches to be applied, and afterwards a poultice to cover the whole of the injured parts; a dose of calomel, and ext. colocynth, to be taken immediately.

2. Complains of great pain in the part, which is likewise swollen considerably; slept very well; bowels freely opened; tongue moist. The poultices have been continued with benefit up to Jan. 11. The wounds looked healthy; his bowels were regulated with house-physic, and he occasionally took a dose of calomel and ext. colocynth.